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THE WORLD VISUALIZED FOR THE CLASS ROOM

1000 TRAVEL STUDIES THROUGH THE STEREOSCOPE AND IN LANTERN SLIDES, CLASSIFIED AND CROSS REFERENCED FOR 25 DIFFERENT SCHOOL SUBJECTS

TEACHER'S MANUAL

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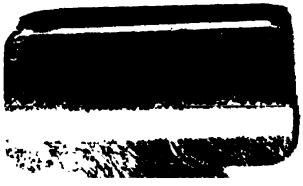

Education

THE WORLD VISUALIZED FOR THE CLASS ROOM

1000 Travel Studies through the stereoscope and in lantern slides, classified and cross referenced for 25 different school subjects

TEACHERS' MANUAL

BY

FRANK M. McMURRY, Ph.D.
GENERAL EDITOR

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In co-operation with twenty-four other well-known educators

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INTRODUCTION

The attempt in the present work has been to provide an organized body of illustrative material on a great variety of school subjects and to arrange it on such a plan as to make all the material readily accessible to any teacher in a school.

The method followed, of arranging the material on a simple cross reference plan, it is believed, will be found most convenient and practical and will greatly conduce to system and regularity in using the same.

The two forms in which the material is supplied, namely: Stereographs and Lantern Slides, fulfill, it seems to me, a great pedagogical need in the line of illustration.

In the present status of public support of Education, financial considerations are apt to enforce limitations on the number of illustrations allowed. The small numerical quantity, however, of the present series (of 600 to 1,000 illustration units) conveys no adequate idea of its very comprehensive character and of the wide scope of school work covered by it. By selecting the subjects largely on the type

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plan, it has been possible to illustrate a great variety of topics in geography, history and other regular studies. At the same time, much valuable material has been afforded to illustrate special activities, such as architecture, agriculture, commerce, etc. The study of plant and animal life, with man's relation thereto, and their zonal modifications, as well as material for important exercises in English composition, including many illustrations in the study of literature of the grades as well as biography, are provided.

An immense quantity of photographs were examined before deciding on the final selection. In making this selection, those photographs have been preferred that combine and illustrate two or more school subjects in the same photograph,—as two or more physiographic features, or two or more related but distinct steps in an industry. Nearly every photograph in the series has a teaching value for more than one branch of study, and is consequently referred to by as many editors as have found it useful in illustrating their different subjects. In many cases, the same number in the series has been referred to twelve or more times.

In presenting ideas, the demand for vividness must ever be borne in mind by the teacher. This can best be accomplished by bringing into the class the object studied. As I have elsewhere said:

* "It has taken centuries of progress to realize this need. During many generations following Columbus's discovery of America, people had an unlimited faith in the power of words, whether the words represented familiar ideas or not. They were as far removed from the use of objects as they could possibly be. They even ignored the mother-tongue in approaching a foreign language, learning Latin through a grammar that was entirely in the Latin language. Finally, Comenius advocated pictures illustrating the idea symbolized by the word, and, in consequence, his *Orbus Pictus,* or picture book, issued in 1657, became one of the most noted school books ever published. By the help of such illustrations, one could give some notion of the object mentioned, even though he had never seen it.

"Another century passed before Pestalozzi was born, who partially convinced the world that even pictures were inadequate, and that teachers must make it their practice either to bring things into the schoolroom to be studied, or to take the children out to see them. The lesson is not yet half learned, but here and there are instructors who do regularly bring insects and flowers into the school, who visit museums with their classes, and even go on lengthy excursions with them. They aim to make not only their nature study but other studies concrete thereby; they visit museums to see historical relics; they make excursions to see actual valleys; they use objects to show how real fractional units can be added. They do all this in order to secure *living pictures* of what is studied. There is as much difference be-

* Method of Recitation, page 165.

tween seeing a thing and merely hearing about it, as there is between visiting Paris and listening to a description of it.

"But, unfortunately, it is often impossible to see and handle the objects themselves. In that case, there are several partial substitutes. Among them are models, maps, photographs, and lantern slides. Any school could make a valuable collection of pictures by simply cutting them out of newspapers and magazines. Thus, waterfalls, industries, beautiful views, etc., could be presented in concrete form."

But the best substitute for the real object is undoubtedly the stereograph, which gives a life-size representation with an abundance of detail that rivals nature itself.

Using stereographs is not play; it is work. The stereograph is a superior kind of text, and a good teacher will not have so much trust in mere print that he will be unwilling to go to some trouble to get the most out of this higher kind of text. Let him realize that the stereograph is a true window to the world of nature and the activities of man, by means of which the pupils may

> Through the loop-hole of retreat
> Peep at such a world;
> Hear the great Babel
> And not feel the crowd.

The lantern slide and stereograph sets supplement each other so well that it is highly desirable to have

both, the stereograph being used for intensive study during the study hour, in the class, or for reference, and the slides for a more comprehensive treatment of the subject, for review by the school or class and for special occasions.

I have given my aid and support to this work only in the broader interest of education. I believe that both the stereograph and the lantern slide have been much under-appreciated as teaching mediums, and I feel that the present work constitutes a needed, practical step in the important direction of better organized visual aids for our schools. Such an equipment as this—notwithstanding its shortcomings—should stimulate a deeper interest in the whole subject of visual instruction, and help along in no small way the effort to divorce teaching from abstract memory exercises, and to connect the pupils directly with the actualities of the earth and the most important activities of man in his relation to it.

(Signed) F. M. McMURRY.

TEACHERS' COLLEGE,
March 3, 1915.

CONTENTS

		PAGE
INTRODUCTION	By Frank McMurry, Ph. D.	i
VISUAL INSTRUCTION	By William E. Grady	ix
The Projecting Lantern in the School		xi
The Stereographs in the School		xiii
Binocular Vision		xix
The World Visualized Series		xxiii
Care of Material		xxix
Methods of Use of Lantern Slides		xxx
Methods of Use of Stereographs and Stereoscopes		xxxiv
Methods of Class Use		xxxvii
The Stereoscope in Primary Grades		xliii
The Stereoscope in the High School, Technical Schools and Colleges		xliv
The Teacher's Preparation		xlviii
When to Use		l
The Lesson		lii
SYNOPSIS		lvi
EDITORIAL BOARD		lviii
CROSS REFERENCE CLASSIFICATIONS:—		
Geographical Classification	By Wm. E. Grady	1
Agriculture	By Homer C. Price, M. Sc.	68
Animals	By John Burroughs, Litt. D.	81
Architecture	James Knox Taylor, F. A. I. A.	103
Biography	Robert Swickerath, S. J.	121
Botany	Elliot R. Downing, Ph. D.	211
Child Life	E. A. Kirkpatrick, M. Ph.	221
Cities and City Life	J. A. C. Chandler	231
Civic Betterment	E. H. Bennett	249
English Composition	James Fleming Hosic, Ph. M.	285
Geology	Albert Perry Brigham, Ph. D.	313
General History	Henry E. Bourne, L. H. D.	325
History of America	Charles Fordyce, Ph. D.	341
Homes and Life of the People	Ada Van Stone Harris	373
Home Economics	Isabel Bevier, Ph. M.	401

PAGE

Literature ..... Werrett Wallace Charters, Ph. D. 427
Manual Training ..... Charles A. Bennett, B. S. 485
Mythology ..... Emilie Kip Baker 495
Nature Study ..... Elliot R. Downing, Ph. D. 517
Physical Geography ..... Wallace W. Atwood, Ph. D. 535
Products and Industries ..... R. H. Whitbeck, Ph. D. 567
Races of Mankind ..... Frederick Starr, Ph. D. 589
Topics for the Grades ..... Richard Elwood Dodge, A. M. 603
Transportation ..... W. M. Gregory 625
Zone Life ..... Ellsworth Huntington, Ph. D. 643
INDEX 677

FOREWORD

Visual Instruction

This is the day of graphic illustration. Every well-informed teacher now realizes that the pupil's shortest and surest road to correct knowledge is through sense experience. "The child's whole mental life," says Bolton in his *Principles of Education*, "is determined and circumscribed by the range of his sensory experiences." Without these perceptions, not only would the lower powers of the mind be lacking, but the growth of the higher powers, like judgment, reason and volition, would be impossible.

The manner of teaching geography and related subjects in the past, however, had little regard for sense experience, and the means brought within the reach of pupils in geography study were certainly very imperfect. Indeed, the narrow routine of geography work in schools displayed little appreciation of the broader ideas of geography—the effect of the climatic and varied physiographic conditions on the life and activities of man. Teachers of geography have mainly depended on memory exercises and written language to acquaint their pupils with a knowledge of the geographic facts of the world and for whatever understanding of the relations of these facts the pupils got. Speaking of this means of teaching, Professor O'Shea says, in his *Education as Adjustment*, that it puts a scholar in his seat and gives him adaptation to a book. In contrast to this, Professor

O'Shea, as so many others have done, recommends a method that will take the pupil out into the world or bring the world to him, using the book only when it restates, though in a new setting, some experience the student has already had. This plan, he says, will do for the teacher what evolution did for the philosopher—open up a world of real substance and not one of mere verbal and formal values. And, when we consider how narrow the average school-child's range of actual experience is, we see what a revolution such new methods mean for him.

Likewise, C. H. Henderson, in his *Education and the Larger Life,* says:

> "We please ourselves by saying that experience is the best teacher, that the world is the best schoolhouse, that travel is the best educator. But, in reality, we prevent experience, we shut out the world, we disallow travel. We ask children to reason and reflect about a world which they do not yet know. We give them small perceptual knowledge—mainly what they get on holidays and when they play truant—and spend nearly all their time in attempting to build larger structures than we have material for—bricks without straw."

The difficulty has been to find adequate means of putting the theories into practice—of taking the pupils out into the world or bringing the world to them. Home geography, it is true, can be studied at first hand through knowledge gained by means of school excursions, and in the ordinary course of the pupil's life. But, in the study of the great world beyond the home surroundings, pupils have been dependent upon word-descriptions, upon maps, and, to an increasing extent in recent years, upon pictures. Undoubtedly, the greatest advance so far toward the accomplishment

of desired results has been made by the utilization of pictures.

In a commendable effort to supply this fundamental need for sense knowledge, publishers have been putting more and better pictures in the school books to illustrate the various subjects treated. Nothing, perhaps, has done more to make geography a live, interesting subject than the enrichment and the embellishment of the better type of text-book with specific pictures; that is, pictures an analytical study of which reveals points which serve as the basis of interesting discussion. Whereas the pictures introduced into the older geographies had little to recommend them but their antiquity, the pictures introduced to-day are reproductions of excellent photographs taken by skilled field-workers.

Nevertheless, however valuable such illustrations may be, at best, they are but faintly reminiscent of the actual place, the dynamic process, the dramatic life incidents. The wide-awake, progressive teachers of to-day, keen for *results*, realize that the small, flat pictures of the text-book, even at their best, are unsatisfactory, that they fail utterly in filling the wide gap that separates the printed text from the actualities of the outside world. Such teachers naturally resort to other means for concrete illustration and find in *the projecting lantern* and in the *stereoscope* invaluable media of visual instruction.

The Projecting Lantern in the School

One of the impressive factors of the present movement toward more direct and concrete methods in teaching is the rapidly growing use of the Projecting Lantern in present-day schools. Indeed, an encouraging sign which bodes well for the coming generation of children is the fact that many

of our progressive teachers are giving the lantern an increasing share of their attention and many of our best buildings count the lantern outfit among the necessary items of their equipment.

Appreciation of the immense capabilities of the lantern as a teaching medium has extended so rapidly that in some cities, nowadays, every school, or nearly every one, can boast of a projecting lantern and a collection of slides bearing more or less directly on the required work of the school.

As a medium of entertainment and for occasional lectures, the lantern has long been much in vogue, but its value as a means of systematic instruction along the definite lines of school work has gained recognition more slowly. Even where teachers have seen the possibilities of the lantern and have desired to inaugurate some systematic illustrative scheme in which the lantern was to occupy a regular place, the paucity of material in suitable slides, and, in particular, slides of high quality, made the scheme difficult to initiate and maintain.

Occasionally, however, it is true, there has been a school man possessed of such high professional ideals and gifted with such unusual qualities of energy and enterprise, that in order to cary out his advanced ideas in instruction, he has persevered, often at sacrifice of personal means, until in the course of time and from many sources he has acquired a considerable amount of valuable material with which he has enriched his school work. Such instances, rare as they have been, have but served to emphasize the need and to stimulate the demand for appropriate material. With the intensifying of the new movement for more definite and concrete aims in elementary and secondary teaching which has carried with it an ever increasingly insistent demand for more and better illustrative material along lines

of school text, the production of suitable slides has been so greatly stimulated that now a school may be provided with fine quality slides illustrating any branch of its work, thus conducing immensely to such school's efficiency.

Moreover, progressive teachers, never satisfied with the unpedagogical methods in the use of the lantern, have been busy working out better instruction methods with it. As a result of their efforts, the lantern is coming to be used by the teacher with greater intelligence and with a system and method that represent higher pedagogical standards of attainment.

The Stereographs in the School

Valuable, however, as is the lantern view in school work, and superior as such a picture is to most other kinds of illustration, no mere pictures lacking in the third dimension can really give the place or the real situation. Such pictures are always extraneous to the objects or places they represent.

Fortunately, in the stereograph, science has evolved a type of graphic material which, if not as real as life itself, is vastly superior to the ordinary photographic picture or its reproduction.

The stereograph is the only means possible of obtaining just what the mere picture lacks—the third dimension—producing perfect space with all the effect of reality.

WHAT IS A STEREOGRAPH?

The stereograph is fundamentally different from the ordinary photograph because it is made on the principle of two-eye vision. That is, the ordinary photograph is made by a camera with a single lens, like a person with one eye,

while the stereograph is made by a camera having two lenses set about as far apart as our two eyes. This camera, therefore, gives two somewhat dissimilar photographs, which, when looked at through a stereoscope, produce these remarkable results:

First, we get *perfect space* for eye and mind—not merely a *suggestion* of space, as in ordinary pictures; objects stand out in all three dimensions, as in nature.

Second, we see objects and places *life size*—that is, in natural size and at natural distance; the stereograph card serving as a window through which we look out at the object or place beyond.

Third, we get real experiences of seeing distant objects and places. It is a scientific fact that while looking through the instrument, it is not only possible but it is easy and natural for one to lose all consciousness of immediate bodily surroundings and to gain *real experience of seeing,* of being *present in* the places themselves.

It is positively true that *not one* of these three results can be obtained by any other illustrative means known to the schoolroom.

"What the telephone does for the ear, the stereoscope does for the eye" is no mere catch phrase. For just as the telephone annihilates time and space and puts one in intimate touch with a situation that would otherwise be remote and inaccessible, so the stereoscope annihilates time and distance and transports us in the twinkling of an eye to the very heart of the distant scene or to the most important phase of an important industrial or commercial process. In accomplishing these results, the stereograph renders a service as an instruction medium that is absolutely unique, and the importance of which cannot be overestimated. The use of the stereoscope means that our schoolrooms can now

be as directly connected with the world outside, through sight, as our homes and offices are now connected with distant people, through hearing, by means of the telephone. It cannot be too often impressed upon the teacher that the stereograph gives the pupils the mental impressions of seeing the actual objects.

Study carefully the places shown in the stereographs of the present series and see what wonderfully vivid glimpses they give of a wide and rich range of subjects covering all phases of school work. You can almost smell the sweet fragrance of the orange grove in Stereograph No. 281; you can almost hear the beating of the angry surf in Stereograph No. 62; and, spellbound, you can watch the rushing torrent as it passes over the precipice and vanishes in a veil-like mist as in No. 71.

Or, again, in the industrial phase of life, you can sense the rush and roar of the log shot down the flume in Stereograph No. 305; you can see the glow of the molten metal and almost lose yourself in the thick clouds of smoke and steam that envelop the great blast furnaces in No. 120. You can get a forcible impression of the quiet heroism of a miner's life as you stand in that glistening chamber and by the light of a flickering lamp try to penetrate the dark recesses beyond, in Stereograph No. 232.

EFFECTS PRODUCED BY STEREOGRAPHS

In the older type of geography lesson, both in terms of text-book and instruction, there was an over-emphasis on locational work *per se*, to the exclusion of the important topic of man in relation to his physical surroundings. Names and geographic facts were repeated in ding-dong fashion until the knowledge was fixed and automatic, but as

devoid of real geographic significance as our knowledge of the sequence of the letters of the alphabet.

The stereograph, properly used, substitutes real, vivid experience for such verbalism of the older locational study. **Dr. Walter Hervey**, Board of Examiners, New York City, writes:

"When one looks at an ordinary picture of a distant place, one feels himself to be still in America or wherever he may be at the time. Through the stereoscope, with the outer world shut off by the hood, one feels himself to be looking right at the place itself."

It cannot be too strongly impressed that stereographs, being of a fundamentally different character from all other pictures, should always be thought of and used differently from the other kinds of pictures. The pictures in geographies are almost wholly used as illustrations of the text, to clarify the facts there given; whereas, the stereographs not only illustrate and clarify the text statements, but they are rich sources of information going far beyond the text and supplying through personal observation new and important facts about the subject treated. By careful study of the scenes, the children themselves are able to discover many of the most important facts and truths of geography. They understand what they have seen and the impressions received are far more permanent. They may easily forget the descriptions in the text-book, but they will always remember the novel customs and typical landscapes that are impressed upon their vision through the stereoscope window. The use of the stereoscope takes more or less of the time formerly given to the text-book, but such use presents truths so clearly and impressively and enables the study of essentials to be so thorough that better results are accomplished and time is saved.

While the stereograph method of seeing things is always of great interest to practically everybody, it is really only in the last few years that educators have come to appreciate the true possibilities of Wheatstone's great invention.

The publishers of this work were the first to take definite account of the fact that it is possible for a person with the stereoscope to pass from the experience of seeing a picture to the experience of seeing and being present in the place itself. By making their stereographs on a definite system, devising accessories such as the ingenious V-ruled locating maps and preparing their special descriptions of the places shown by them,—*accessories* which are *special* to, and which, with stereographs, comprise what is known as the *Underwood Stereograph System*,—they have made these experiences possible to anyone. These developments brought the matter to the attention of leading psychologists and, recently, over a score of the highest authorities on psychology and philosophy in this country made the following statement of the extent to which the experiences gained in stereographs approximate the experience of seeing the objects and places themselves.

The Psychologists' Statement

"If a stereoscopic photograph of a place *is used with certain accessories* (as special maps which show one's location, direction and field of vision, etc.) it is possible for a person to lose all consciousness of his immediate bodily surroundings and to gain, for a short time at least, a distinct state of consciousness or experience of location in the place represented. Taking into account certain obvious limitations, such as lack of color and motion, we can say that the experience a person can get in this way is such as he would

get if he were carried unconsciously to the place in question and permitted to look at it. In other words, while this state of consciousness lasts, it can be truly said that the *person is in the place seen.*" (Signed)

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Professor George Trumbull Ladd, and other educators, express their positions in exactly the same terms save the last sentence, which they modify to declare emphatically that while the state of consciousness above described continues *"it can be truly said that the person is really seeing the place itself."*

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Binocular Vision

For the benefit of those who may not have given this subject any particular attention, we ought to summarize

here a few fundamental facts about binocular or two-eye vision and binocular or stereoscopic photographs. Most people have never stopped to think why we have two eyes. To them, the second eye seems only a generous provision in case one eye should be lost. The second eye, though, means much more than that to us. First of all, since our eyes are some distance apart, each eye gets a somewhat different view of all solid objects near us. The right eye sees a little farther around the right side, the left eye farther around the left side of the object. This fact, together with other facts, means that a person with two eyes gets a very different idea of the shape and size and distance of objects than a person with one eye. But, great as the difference is, it is easy to overlook it. When we close one eye we might think we see about as well as when both eyes are open, but this is a mistake. Psychologists say we read into what we see with one eye shut, what we have learned with both eyes open. Some unusual test is required to make us wake up to the defects of one-eye vision.

Binocular Photographs vs. Other Photographs

Now, turning to photographs, all ordinary photographs are made by a camera with a single lens—thus showing an object or place as it would be seen by a person with one eye. Stereographs, or stereoscopic photographs, on the other hand, are made with a camera having two lenses, set about as far apart as our two eyes. A stereoscopic camera, therefore, always gives two photographs of places or objects. These two photographs are mounted side by side on the stereoscopic card, and to the casual glance appear alike. Yet, since they are taken from different points of view, they must, of course, always differ somewhat—in fact, exactly

as the impression received by one of our eyes differs from the impression received by the other. Now, when these two slightly different photographs are looked at in the stereoscope, the effect is radically different from what we should get in looking at an ordinary photograph in our hands. Indeed, the effect is in all essential respects the same as that which we should get by standing where the camera stood and looking at the scene itself.*

What We See in the Stereoscope, and Nature of Experiences Obtained

But to repeat briefly the analysis of the effect given in the stereoscope—we get, first of all, *perfect* or actual space for our minds, as contrasted with the *appearance* of space in ordinary photographs. Objects stand out in all three dimensions, or as solids, as in nature. Second, we see objects and places life-size; that is, in natural size and at natural distance. Because of the smallness of the two photographs composing the stereograph, it is natural to assume that things are seen in the stereoscope in miniature; but the two prints, a few inches from the eyes, serve as windows through which we look. Third, while looking at these stereographed scenes in all three dimensions, life-size, and of almost infinite accuracy of detail, and with one's immediate surroundings shut away by the hood of the stereoscope, it is possible to lose all consciousness of the place where the body is, and to gain, for appreciable lengths of time, a distinct consciousness or experience of being in the very presence of the object or place represented. This is the unrivaled claim for the stereograph.

* The publishers issue some cards with diagrams and photographs so mounted on them as to bring out in a striking manner the difference between ordinary and stereoscopic photographs.

As compared with the experience of the actual traveler, there are definite limitations to the experiences made possible by the stereograph. We do not gain the traveler's experience of movement. We can have only experiences of standing in certain specific places and looking over definite and limited fields of vision. We do not receive impressions through our senses of touch, taste, smell, or hearing—all our impressions come through our sense of sight. But sight is more important than all our other senses in giving us our experiences of location, and is indeed sufficient for this purpose. Furthermore, the times when we can forget our bodily surroundings and gain a consciousness of being in the places represented will be limited, perhaps to periods of a few seconds each, but feelings and emotions come quickly, and hence we can know a part at least of the feeling stirred by being in these places. At any rate we should see that, though there is a difference in the quantity or intensity of the feelings, there need be no difference in the kind of feelings experienced. We may experience the same *kind* of feelings and emotions that we should experience in the places themselves. And the fact that one can come back to these scenes in the stereograph again and again makes it undoubtedly possible to approximate much nearer than we think to the full emotional experience of the traveler. In other words, it is now recognized that we have in the stereograph not only the climax of all illustrations, but also that (when certain helps are provided and it is looked at in the right way) the experiences thus made possible are comparable to those we should get by being transported to the places in question and allowed to look at them.

Here, then, is found the one means by which pupils can be taken out into the world, a means of "enormously expanding the horizon of their daily lives." Certainly the

changes thus made possible in the methods of teaching geography and related subjects are little less than revolutionary.

THE WORLD VISUALIZED SERIES FOR THE CLASSROOM

THE UNDERWOOD STEREOGRAPH AND LANTERN SLIDE SYSTEM OF VISUAL INSTRUCTION IS NO LONGER AN EXPERIMENT. It is to-day in wide use, and has, in the test of actual experience, won the unqualified endorsement of the highest educational authorities of Europe and America, some of whom, like Prof. Charles Foster Kent of Yale University, declare that *"it is nothing less than epoch-making"* in the history of education. Furthermore, the governments of various countries have shown their appreciation of the high merit of this System of Visual Instruction by placing extensive orders for the supply of the material for use in their Departmental and other Government schools.

For years, as is well known, Underwood & Underwood have been sending their operators to all parts of the world for the purpose of obtaining their educational negatives. Over 250,000 original negatives are now in their possession.

The large demand for their educational material in the schools has led the Company to this further important step, the production of a single series of stereographs and slides which, in the smallest possible compass, constitutes an entire visual instruction equipment for the whole school, and one that by reason of its high authorship is authoritative. The intention has been to give in the one series of 1,000 subjects, carefully edited and arranged by 24 foremost educators, a general survey of the world in terms of physiography, industry and commerce, history, and their related features of social life. By a very careful selection of sub-

jects applying to all branches of school work, and an authoritative arrangement of them by the editors, suiting the most numerous phases of classroom use, a unique teaching value is given to the present series entitled, THE WORLD VISUALIZED FOR THE CLASSROOM.

Guiding Principles

In the preparation of this work, the editors have been guided by certain controlling ideas as to the selection of subjects and their utilization, which seemed to them fundamental.

FIRST.—The endeavor has been to illustrate as many as possible of the fundamental ideas in the different school studies. This has been accomplished by a careful selection according to *type*. There have been included, for instance, in this series, such basic types of physiography as mountains, valleys, rivers, plains (coastal and flooded), etc., of which a rational treatment of the older locational geography presupposed some knowledge, and a thorough knowledge of which the so-called "new geography" considers fundamental.

Moreover, since industry, agriculture, and commerce are at the base of all civilization, type studies in lumbering, mining, fishing, manufacture, modes of transportation, etc., have been included.

Then selections were made showing race types and phases of civilization most characteristic of such races, whether in homes, costumes, religion, recreation, architecture or related values, literary or historical.

SECOND.—The endeavor has been to select such subjects that would illustrate in the same scene two or more types of the same or different studies, in order to reduce the size

of the series and thus reduce the cost to a minimum without lessening its teaching value.

THIRD.—The endeavor has been to thoroughly classify the material for every school subject to which it would apply, to correlate it with the regular text, to provide helps in notes, outlines, etc., and to prepare a guide for the teachers in the use of the material that would be authoritative, yet simple and easy to follow.

FOURTH.—The endeavor has been to arrange the material on a plan convenient for reference for any study and for all the ideas represented by it.

The Cross Reference System

Having selected the stereographs and slides of the greatest intrinsic value, a simple *cross index device* was adopted to insure the widest possible use of them, by enabling a teacher to quickly refer to any particular stereograph or slide for any number of school subjects to which it might apply. After the selection of the subjects had been decided upon with the greatest care and the special negatives of them obtained as directed by the editors or selected from those already on hand, they were classified geographically and then arranged and numbered in serial order from 1 to 1,000. This classification constitutes the "Directory of Places," or title list which forms the basis of the whole work. Subsequently, each of the editors having been assigned to a different department of the work took the material and selected from the 1,000, in each instance, the stereographs or slides that would be most useful in teaching the particular subject which had been assigned to him, such as, "History," "Products and Industries," "Physical Geography," etc. Each editor then made a thorough classifica-

tion of his material, arranging it in the manner most convenient and useful for classroom work in his particular subject, and prepared helpful notes, practical suggestions to teachers, blackboard outlines, etc.

In all the twenty-five classifications of the material made by the different editors for the different departments of school work, the stereographs or slides are referred to by the serial numbers of the first arrangement of them—The Geographical Classification. By this simple cross reference system there is made available any slide or stereograph of any of the twenty-five subjects for which the series is classified and in which the particular stereograph or slide is included.

How Comprehensiveness with Economy Is Secured—Many Subjects in One

In order that each particular illustration might serve in the widest possible manner, the photographers have been directed in making the negatives to combine, wherever practicable, several educational features in each negative. For instance, if a physical feature were to be illustrated, it was desirable to find it in a landscape that had as many other features as possible and then by an ingenious *cross-reference plan* make it possible for the teacher to use it to illustrate the physical feature, a step in an industry, or a race type, etc. Thus, one stereograph or slide may serve as many uses and do the work of as many single idea stereographs or slides as the different lines of interest it contains. Its educational value is thus correspondingly enhanced, and, as it still constitutes but one stereograph or slide though illustrating several topics, great economy to the purchaser is obtained.

While this principle for obvious reasons could not always apply, nevertheless, in selecting the stereographs and slides for use in this World Visualized equipment, preference has been given to those that show excellent examples of subject types under two or more main classifications. If, for example, of three particular stereograph illustrations of an industry, one showed the industry only; another showed the industry and an important physiographic feature of the country; while a third showed those two features and also another feature,—as a good race type, or type of child life or home life,—the last is the one that was chosen, and is in practical service equal to three illustrations showing only one feature or type. In this present series almost all the stereographs and slides are useful in from two to six—and many of them in eight, ten or more different departments of school work, thus giving a much wider possibility of use to the various teachers in any school than any series of stereograph illustrations of equal number ever hitherto provided. Indeed, in actual utility, this series is equal to over *twelve thousand* different stereographs or slides selected on the expensive and cumbersome plan on which illustrative material has hitherto been purchased. In other words, the ground covered by this series would have required, to cover it on the usual basis, some twelve thousand stereographs or slides. *The work of such a series of 12,000 is now done by this one thousand.*

Simplicity and Efficiency

The stereographs or slides are arranged in filing cases or cabinet drawers according to the Geographical Classification, starting with the New England States and going West, then to the Possessions of the United States, other countries of

North America, South America, Europe, Asia, Africa and Oceania. This is a very simple plan, exceedingly convenient for use.

Each stereograph or slide bears on the upper right-hand corner in clear, readable type its serial number, according to the Geographical Classification, and each drawer or case contains the stereographs or slides in serial order with index tab cards printed in clear, readable type. Any country or number in the Series may be instantly found by the teacher, thus greatly facilitating wide and general use by the different departments in schools and yet preventing confusion when different departments are using the series at the same time.

Descriptive Text

An important feature of this series that greatly adds to its value both for reference and for class use, is the excellent descriptive and explanatory text on the back of every stereograph card and which is supplied separately for each slide. These explanatory and technical descriptions cover all the most important points in connection with each subject shown. This text has been carefully prepared and will be found of much importance to both teacher and pupil, rendering it unnecessary to hunt here and there for information about places or objects shown. This is provided in the text so as to be instantly available. It supplements the regular text-books of the schools in a most valuable manner. For convenience of reference, the descriptive text is often divided under several of the school topics for which any particular stereograph or slide is likely to be of special use. For example, the text for No. 1 is under the headings of Geography, Literature, Geology, Architecture and His-

tory; or No. 59 under Geography, Agriculture, Industries, People and Homes, History.

Care and Maintenance of Said Material

The mere presence of Visual Instruction material in a school does not insure either the use, or more important still, the proper use of the said material. The following suggestions may prove helpful:

(a) Wherever located, the material should be filed in such a manner as to insure its safety and cleanliness. A simple rack for the 'scopes and properly indexed filing boxes or cabinet drawers for the stereographs and slides will add greatly to the life of the material. For obvious reasons, provision should be made for a moist cleaning of the 'scope at least once a month. The lenses should be wiped frequently.

(b) Whether the material be filed in the supervisor's office or in a "key" room; that is, a room designated because of accessibility, vigilance of teacher, etc., the material should be readily available when needed. In a large school, a tentative or elastic schedule should be adopted so that each teacher may know the approximate time limits within which the material is available. The teacher or secretary in charge of such material should keep a simple check list indicating date of loan—to whom loaned—subject covered—when returned. Whenever a teacher takes any of the stereographs or slides, it may be advisable that a card or slip of paper containing this teacher's name and the numbers of the subjects taken be placed in the case or drawer until the material is returned.

METHODS OF USE

The chief obstacles to the successful use of such material are timidity or lack of confidence on the part of teachers, and ignorance on the part of the pupil as to what he is expected to do.

The important point to be noted in this connection is that the successful use of such material means such frequent use both in a particular class and in a series of grades that the entire handling of the material will reduce itself to a familiar routine. In other words, reduce the procedure to the level of habit. A simple scheme of use, whatever its merits or defects, will, if handled often enough, enable teacher and class to focus attention on the essential, *i. e.*, the content of the scene rather than the handling of the material.

HOW TO USE THE LANTERN AND LANTERN SLIDES

For class recitation periods, for review and for special occasions, the projecting lantern equipment with the present series of slides has certain advantages over every other form of concrete illustration, though the stereoscope is far superior to the lantern in certain other important respects. These two forms of illustrations, the lantern slide and the stereograph, are complementary to each other—each fulfilling a particular school need and together forming an ideal Visual Instruction equipment.

Both slides and stereographs have their special places as teaching aids, and they supplement each other so fully that it is only by the combined equipment that the best results are obtainable. For reasons of economy, schools often purchase one or the other to begin with, but whichever is se-

cured first, slides or stereographs, the most progressive schools are not satisfied till they have obtained the complete combined equipment which comprises THE WORLD VISUALIZED FOR THE CLASSROOM Visual Instruction system. With such an equipment for visual instruction, a school may supplement one with the other in a way to gain the highest possible teaching value from the whole.

STEREOGRAPHS FOR DAILY LESSON SLIDES FOR WEEKLY REVIEW

For individual and *intensive* study, nothing can equal the stereograph which gives an absolutely correct and nature-true representation, color excepted, containing all the infinite reality of detail of nature itself. The stereograph is more suitable for individual use, and the lantern for audience work. Stereographs and stereoscopes by their lightness, simplicity and accessibility are more convenient for immediate or daily use and require only a moment at any time to put them into use. Where the stereographs are used for the daily lesson, the lantern may well be used for weekly review of the work done, using the same subjects in the lantern slides as have been used in the stereographs. New knowledge is well comprehended and fully appreciated only when abundant, familiar ideas closely related to the new are present in the pupils' thought, and this linking up of the old topics with the new may be very effectively done while showing on the screen selected scenes from the previous topic and following with those pertaining to the new. In some large schools, where there are several teachers of the same grade, the principal uses the lantern to outline the lesson to the teachers. They, in turn, use the stereographs in the classroom, though some first use the slides to briefly introduce the lesson. In such cases they use the

stereographs immediately afterwards, using the same subjects in stereographs as were used in slides.

CLASS RECITATION WITH THE LANTERN

Where the lantern is used for the class recitation period, each pupil may be assigned in advance some special reading on the topic, and then as the slides pertaining to the topic are thrown on the screen, a careful, detailed study is made of each one by the whole class together, while the facts relating to the topic are brought out by questions and recitation in the usual way. Or, as each slide is thrown on the screen, a certain pupil is called upon to recite fully upon it—this pupil having previously had access to the stereographs, with an opportunity to supplement his text-book study with the descriptions on the stereographs or on the printed slips that go with the slide. These stereograph or printed description slips may be very fully studied, if taken home previous to the lesson. In the higher grades or the high school, several slides or all covering the subject may be assigned to one pupil who may be expected then to give a concise account of the whole topic.

THE MORNING ASSEMBLY

In some schools, the lantern is very successfully used in the morning assembly period, either daily or on certain days of each week, when some branch of the school work is taken up with it. If then, some time following the exhibit, the teachers of the various classes make reference to the slides shown, questioning the pupils and developing points for discussion, the effectiveness of the slides is increased.

ASSEMBLY EXERCISES BY PUPILS

Where a school has the complete combined equipment of slides and stereographs, a system of alternating the stereographs and slides that is much appreciated is as follows:

When all the classes studying the same subjects, say Japan, have used the stereographs, the children having been required to write an account of what they have learned from them, in good composition, the same scenes are used in the assembly hall with all those classes present. These assembly exercises are conducted chiefly by the pupils who wrote the best compositions from the stereographs in the classroom. The honor of being designated to conduct the exercises is much appreciated by the pupils. In case an industry is under discussion, the different steps are shown in sequence in the slides, and the children's success, as shown by their compositions, in getting the sequence of the industry from the stereographs is one of the important points in terms of which the composition is judged. Thus, these assembly exercises with the lantern serve not only the purposes of instruction and review, but also stimulate a healthy rivalry in the study of the stereographs.

SCHOOL ENTERTAINMENTS AND LECTURES—PUPILS' LECTURE PLAN

This WORLD VISUALIZED equipment in lantern slides offers much excellent material for school entertainments and for lectures. Teachers, principals or superintendents, desiring to give an illustrated lecture to a class or school on some topic of school work, may do so effectively with the slides in this set. School entertainments with the lantern, to which parents and friends are invited, are found most successful where the pupils themselves give the lecture. A pupil is assigned to a slide, the accompanying text of which he thoroughly memorizes and recites as the slide is thrown on the screen. The pupils take great delight in taking these public parts and their work always indicates diligent, earnest preparation. Such an entertainment given by the pupils them-

selves creates great interest in the district, and is a valuable method of attracting public attention to the work of the school and of stimulating a healthier interest in the school among its patrons and friends.

Just when and how the lantern should be used will depend much on the arrangements in the particular school. In this Series of 600 or 1,000 slides, the material is so rich and varied, and covers such a wide extent of school work, that progressive teachers having this equipment accessible find little difficulty in making extensive and regular use of it.

HOW TO USE THE STEREOSCOPE AND STEREOGRAPHS

There are several methods of using the stereoscopes in the schoolroom. Some teachers are naturally inclined to one method and some to another, but a teacher should not be too insistent that any particular method is best except under certain given circumstances. Any method, consistent with school discipline and co-ordinate with the regular work of the school, that will get these life-size stereographic scenes intelligently before the minds of the pupils for even a few seconds, is well worth while and will be productive of results of immeasurable value. The fact cannot be too strongly impressed that in such glimpses the pupil is not seeing a picture merely, but is looking out through the stereoscope as through an open window at actual places and objects in the world, and in doing so receives impressions similar to those he would receive were he actually in the situation or in the presence of the object. In connection with a history or geography lesson, no one would seriously question the educational value of even a few seconds spent in looking at the actual Pyramids; the beautiful snow-capped Fujiyama;

the gigantic steam shovels of the Panama Canal cutting their insistent way through a mountain; a plantation of luscious pineapples in Porto Rico; the Pigmies in their home in the Congo; or a whale-fishing scene in the Arctic. Indeed, in connection with the study of these topics, a good teacher would be glad to provide the time for the pupils to file past an open window, one at a time, if by so doing they could get even a glimpse of these important scenes. Such a teacher would feel that the experience, even when so limited in time, would be worth more than book study alone, and what is more, would so vivify the book study as to the facts being retained in vivid memory as a part of the pupil's personal experience. Now, for all practical purposes of instruction, that is just what is possible by means of these stereograph windows through which—as Prof. Kirchman, Ph.D., of Toronto University, says, "one look at an Alpine glacier teaches more than hours spent in reading or hearing descriptions."

Teachers cannot be too strongly cautioned against a slip-shod, haphazard manner of using stereographs. Valuable as the results are that are claimed for them, it does not necessarily follow that any use is better than no use. The best teaching material will not produce satisfactory results of itself without system and method. Stereographs are no exception in this respect. So wonderfully attractive to both children and adults, this very attractiveness is a prolific source of weakness in the handling of them in the schoolroom. Teachers have sometimes failed to resist the temptation to use them as a reward of merit, a picture show or a device to keep disorderly pupils quiet. Not only do such loose and unpedagogical methods or lack of methods with the bad discipline inculcated by such careless use fail of utilizing the real teaching values of stereographs, but

other more exacting teachers are sometimes discouraged thereby from attempting the use of this valuable material that is now generally recognized as a teaching aid of the greatest importance.

A SCHEDULE SHOWING WHEN AVAILABLE

Whenever a school obtains either the 600 or 1,000 stereograph equipment, it is advisable for the superintendent or principal to make out a schedule assigning at least one period a week when each teacher can have the use of as much of the material as she may need. The teacher may use her judgment as to how much she uses, whether one or two or a dozen or more of the instruments and stereographs, but it should be repeatedly emphasized that this weekly use of the material, as far as it bears on the lessons, is not only a privilege but a duty.

The manner of using the stereographs requires to be carefully thought out by each teacher. Stereographs are as a "superior kind of text" and should be subject to the same care and system in use as any other text or school aid.

The following suggestive methods of using the stereoscopic material in the schoolroom are based on actual schoolroom experience and have given satisfactory results:

1. **The Study Hour.** (a) One or more views bearing on the day's lesson with a stereoscope for each are started around the class, and the children allowed to study them in the order in which they reach them, one after the other. This method is appreciated in some schools, especially for lower grades.

(b) Views illustrating the day's lesson, with a stereoscope, are placed on a table or desk in the room in the morning, and the pupils allowed to study them through the day as they accomplish their work. One objection to this method

is that the slow or more backward pupils who need the help of such material most are apt to get the least opportunity to use it.

2. **Outside Regular School Hours.** The stereographs bearing on the day's lesson being placed on a desk or table in a room, the pupils are told they may study them at intermissions, and before and after school hours. As a rule, this method is not to be depended on, especially if optional with the children, as most children will not voluntarily sacrifice the limited play hours for the study of stereographs, attractive as stereographs may be to them.

3. **Reference Library Method.** Many institutions have met with good results by having sets of stereographic travel tours of the different countries of the world placed in the school library, and then the children refer to these sets from time to time in connection with any particular branch of study, just as they refer to supplementary books. This method has been found the most successful in the higher grades and the high schools.

4. **Class Recitation Period.** Perhaps the most successful method, both as to regularity of use and practical results obtained, is the use of the stereographs in the class recitation. Many teachers have adopted this method as offering the largest results with the minimum of difficulties. While there are several systems of passing the stereoscopes in class recitation, the following may be taken as one widely used and strongly recommended.

METHODS OF CLASS USE

This method is working successfully and has given entire satisfaction in hundreds of schools. Thus, the mechanical

difficulties hitherto encountered in the use of stereographs have been reduced to a minimum.

The diagram represents a class of 48 sitting 8 across the room and 6 deep; each "x" represents a pupil.

This simple method is practical, efficient and thoroughly satisfactory and no duplicate stereographs are required. It may be modified to meet the varying conditions as to size and arrangement of class.

6	x	x	x	x	x	x	x	x
5	x	x	x	x	x	x	x	x
4	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x
2	x	x	x	x	x	x	x	x
1	x	x	x	x	x	x	x	x
	A	B	C	D	E	F	G	H

Teacher's Desk

ONE ROW PASSING

The number of stereoscopes used, of course, should correspond to the number of seats in a vertical row. In the present example, indicated above, having six seats in a row, six stereoscopes are used.

Nos. 1-6 represent six stereoscopes, each containing a stereograph of a different subject and each placed on the desk of a pupil in column "A."

While the six stereoscopes and six selected stereographs are all different, they should all bear on a given subject and they are placed on the six desks in row A. At a signal from the teacher, the pupils in row A use the same. When a definite time has elapsed (one-half a minute or more,

according to the length of the recitation period), the teacher gives an audible signal and the material is passed to pupils in row B. At the next signal the material is passed to row C, and so on across the room. When row H has thus completed its inspection, the teacher says "shift" and the pupil in the back seat of row H brings his 'scope and stereograph down to the pupil in the front seat of row H and each of the others in row H passes his material to the pupil immediately behind him. Again the signal is given and row H use the 'scopes. At the next signal, the material is passed to row G and so on across the room, when the same kind of shift is made and the material is again passed back to the right. This is continued until each pupil has seen each of the six subjects.

TWO ROW PASSING

In a similar manner two rows may be passed at once, if desired, with equal success, and thus twice as many stereoscopes and stereographs used at once. When two rows are passed, it is desirable to start one row and allow time for those stereoscopes to get several rows or half-way across the room before starting the second row to follow. Many prefer, in double row passing, to start each row simultaneously from opposite sides of the room and let the passing be toward the centre till the rows cross each other.

The consecutive method of passing. With some subjects, such as one relating to a particular industry for which several stereographs are used, each showing a definite, successive step in the industry, there are some advantages in the consecutive method of passing the 'scopes. That is, start the first stereoscope with the stereograph showing the first step in the industry at the head of an outside row and then pass that stereoscope and stereograph, and the others

following it one after another throughout the class with the stereographs showing the different steps of the industry succeeding each other.

In either the double or single row passing, the pupils will have a brief interval between their periods of looking at the stereographs. This is a good plan pedagogically. Impressions are likely to be blurred if one stereograph comes right after another. While waiting for their turn, the pupils may be reading in their text-books, locating on their maps the places to be visited or writing a description of what they have just seen.

If the teacher desires the children to occupy the interval in reading up the subject of the lesson in their text or reference books, she should indicate orally or in writing the pages or paragraphs they are to read; or if there is a variety of topics and the book has a good index she may utilize the occasion by having them use their indices in looking up the topics. The writing plan is an excellent one. If the children know they are to report on what they see, they do not sit passive but look with extremely active attention. Of course, the children's notes will give no adequate idea of all they gain from the stereographs. A child's power of expression lags far behind his powers of impression. Besides, most children have received very little training in describing what they gain directly through their senses. This plan offers splendid opportunities for such training, and correlates the work in geography, nature study, etc., with the work in English.

BLACKBOARD OUTLINE

When the teacher has placed on the board an outline of the topics of the lesson as shown by the stereographs, such as the successive steps in an industry in a lesson on com-

mercial geography or the different types of physical features if it be a lesson on physical geography, she discusses the topics briefly to make clear to the pupils just what points of knowledge they are to look for in studying the stereographs. She also makes use of the observation outline such as is given by many of the editors at the head of their classifications, putting that or something similar on the board to better direct the pupils' attention and to guide them in their study.

While the pupils are looking at the stereographs, the teacher may make comments or ask questions on the most important and characteristic features to which she wishes to direct attention.

Another good method is to put the serial number of each stereograph used for the lesson on the board with appropriate questions after each number so that the children, as any particular stereograph reaches them, may look at the board for the number that corresponds with the number on the card and read the questions and study the stereographs for the answer, thus gaining definite and specific guidance for each view. After passing any stereograph on to his neighbor, the pupil then writes out his answers in good, clear sentences.

The usefulness of the questions on the board for each stereograph scene may be still further increased if the teacher instructs the pupils in the first vertical row when ready to use the stereographs to call out the numbers of the stereographs they have. Then the pupils in the corresponding horizontal rows look on the board and study the questions relating to the stereographs they are next to see. In a lesson on the Rice Industry, say, No. 1 pupil calls out "No. 972" as the view he has; then all the pupils in row 1 look on the board and spend the time until that

view reaches them in familiarizing themselves with the questions pertaining to that view, so that when the view does reach them, they are the better prepared for studying it effectively. Say, No. 2 pupil calls out "No. 971" as the view he has, and at this signal, the pupils in horizontal row 2 study the questions on the board pertaining to that view, etc. When the stereoscopes have crossed the room and have changed hands in the last row, then that row calls out in a similar manner the numbers they have, signalizing the stereograph questions the pupils in the corresponding horizontal rows are to study while waiting for the stereoscopes to reach them.

In order to clarify and correct the impressions gained, a few minutes are reserved at the end of the lesson for a discussion of the subject studied. These few minutes may be occupied by asking different ones to read their written notes or to recite orally on what they have observed. Or, the teacher may further impress and interpret the facts of the lesson by careful questioning, in order to insure the right deductions from the observations made and a correct grasp of general principles; or she may send the pupils to the blackboard to correct and amplify their notes.

INFORMAL CLASS USE

While we would strongly recommend the above systematic method of using the stereographs in the class, we would also particularly emphasize the importance of informal methods as when a teacher takes one, or two, or three or more stereographs bearing on the lesson and lets them pass through the class either during the recitation period or at any other time. Hundreds of lessons can be vitalized and made easy to remember by passing one or more of these life-size, wonderfully real representations in this informal way. While

many teachers may begin with such informal methods, we believe that they will soon recognize the advantages of a more systematic method of using the material such as we described above.

THE STEREOSCOPE IN PRIMARY GRADES

Excellent use is made of stereographs in oral and written English, not only in primary grades, but also in all grades up through the high school. The following is a method used with excellent results by teachers of first and second year primary classes.

The teacher calls forward 8 to 10 pupils, leaving the rest of the class to look on and listen. She gives each one of these called forward a stereoscope, with a different view for each pupil, the views being selected with reference to the age of the pupils. The pupils stand in a row in front of the class, and as they look through the stereoscope, the teacher asks them in turn to tell the class what they see. With his eyes enclosed in the hood of the instrument, No. 1 describes what he *sees* in the present tense, as "I see a tiger in a cage" (No. 896), "I see several children in a field of daisies with a pony" (No. 84), etc. No. 1, beginning with 1B, then goes to the board and writes what he *saw*, using the past tense. While No. 1 is writing on the board, No. 2 describes his scene orally and then goes to the board, and so each of the remaining pupils in turn. When the last one has described his scene orally, the teacher asks each one in turn to stand and read what he has written, the class criticising the work for correctness of tense, spelling, capitalization, diacritical marks, etc. This occupies the 20 or 25 minute period, and on the following day another section of the class is taken in the same way.

Thus, values in English are impressed in a perfectly natural way on the mind of the child, and in a way that fastens them in his memory. This method is particularly valuable in teaching sentence unity, proper use of tense, correct capitalization, and the proper use of quotation marks, as, for example, where in a stereograph title someone's statement is quoted. This method is also useful in teaching the definition of words, as, for instance, in a view showing an eagle looking down over a precipice, the children describe what the eagle is doing and develop the word "peering." Similarly, many other words may be developed by use of stereographs selected for the purpose.

THE STEREOSCOPE IN THE HIGH SCHOOL, TECHNICAL SCHOOLS AND COLLEGES

There is a wide field in the high school, technical school and college for the use of both stereographs and lantern slides. Generally, in such schools, the laboratory method is employed, but this method should be supplemented by use of stereopticon lantern slides projected on the screen in the classroom.

The use of the stereographs in the classroom in the grammar schools provides for a 20 to 90 seconds' period for the pupil to study one stereograph. This is quite sufficient time for the study of a stereograph for ordinary geographical topics, and has proven ample time for the pupil to acquire a good idea of what the stereograph contains; but in the study of such subjects as Geology and Ancient History, where a minute and meditative study is necessary, five and ten, or in some cases as much as thirty minutes is not too much time for a pupil to spend upon a stereograph. Therefore, it is suggested that the laboratory

method of use be employed whenever possible. But as there may be circumstances where this method would be impracticable, we suggest that the stereographs may be used with a high percentage of efficiency by providing a *certain number of duplicates.* Say, for example, that a class of eighteen students were seated in six vertical rows of three pupils each—as per diagram—and that three different subjects were to be shown:

DIAGRAM

3	x	x	x	x	x	x
2	x	x	x	x	x	x
1	x	x	x	x	x	x
	A	B	C	D	E	F

By having three stereographs of each subject, or nine stereographs altogether, every other vertical row may be provided with a stereograph; the stereographs in row "A" being all of one subject, the stereographs in row "C" being all of another subject and the stereographs in row "E" being all of one subject, those in row "E" are passed to row "F," and row "F" having finished with them, they should be collected and taken around to row "A"; and the same should be done with the stereographs in row "C" when they have been finished by row "F." In this way the stereographs will travel from right to left across the room until each of the eighteen pupils will have seen each of the three subjects shown. This will permit each pupil to study a stereograph for from 4 to 7 minutes, depending upon the length of the recitation period, and give ample time for preliminaries, etc.

The above suggestions, when studied in connection with

the lessons as outlined for grammar grades, will undoubtedly be sufficient to enable a teacher to use these in the classroom with considerable success even in a subject where time is required for careful detailed study of each stereograph. During the inspection of the material by the pupils, the teacher will have ample opportunity to point out certain important features in the views or to direct the attention by means of pointed questions.

IN GEOLOGY STUDY

On the above outlined plan the stereographs may be used effectively in the study of many specific topics in geology, such as the development and action of rivers, the movement and resultant topography of glaciers, the action of wind, frost and rain, the movement of the earth's crust, the character and structure of rocks, etc. In Dr. Brigham's classification for Geology will be found much material of great value, and a still wider range of material may be found in the Publishers' general catalogue.

ANCIENT HISTORY STUDY

In the classification for General History, Dr. Bourne indicates under convenient topics the specific views he recommends for use. If the instructor desires to supplement the matter, a much wider range of material may be found in the Publishers' general catalogue illustrating not only these topics more fully, but also many topics not found in the WORLD VISUALIZED series.

In the study of a history topic, the stereographs should have the pupils' undivided attention for a longer period than is necessary with most other subjects. In the study of the Roman Forum, for example, a student may profitably de-

vote as much as 30 minutes to the study and meditation on one single view of the Forum where such a wealth of historical ruins fairly overwhelms one. In order to get the most from such a study, the first essential is to get one's surroundings clearly in mind and to locate oneself in the scene that he is visiting through the stereoscope. This can be done only by a careful use of the locating map,* and even then he will not be able to appreciate all that is before him, without a careful study of the text printed on the back of the stereograph; or better still, the unabridged description in the carefully written guide book. Such reading will insure, on part of the pupil, an intelligent knowledge of what he is looking at and will enable him to reconstruct in his mind's eye the splendid temples as they once stood, and to repeople them with the historical characters. It is quite obvious that so much time cannot be given to the study of individual views in the class, but the time may be provided by utilizing the stereographs in the laboratory method.

Of course where it is not possible to use the laboratory method, the subject may be handled in the classroom by means of duplications of both stereographs and locating maps on the same plan as has been suggested for Geology. While the laboratory method is to be strongly recommended, the use of the stereographs in the classroom in the way suggested above will be greatly superior to the use of ordinary methods of illustrations, and will quicken the interest in Ancient History to an extent that even the best illustrations in other forms, including lantern slides, fail to do.

* Special locating maps, together with specially written guide books, are supplied with the stereograph tours of Egypt, Greece, Italy, Palestine and many other countries.

THE TEACHER'S PREPARATION

A primary condition to the most successful use of this Visual Instruction material is not only a firm conviction as to its value, but also an intimate knowledge of the contents of the 600 or 1,000 set. To insure each teacher's acquaintance with the material as far as it relates to her particular work, she should be supplied with either the complete *Teachers' Manual* containing all the 25 classifications, or at least with each of the separate pamphlets containing classifications for subjects taught by her, including the basic list —the Directory of Places or Geographical Classification, according to which the stereographs and slides are numbered and filed in the cabinet drawers.

It is imperative that before using the material the teacher familiarize herself with all the stereographs or slides bearing on the subjects taught by her, in order that she may be able to direct the observation and thought of the pupils.

In field work relating to the home community, no teacher is successful unless she has closely studied in advance the actual land forms or life activities to be observed by her class. So, also, in stereoscopic field work in distant lands, or in the use of the lantern slides, a teacher will not be successful until she has gained sympathetic entrance to the atmosphere, to the spirit of the scenes to be visited or shown on the screen, and has discovered the really important but not always obvious truths that she wishes to lead her pupils to perceive. When a teacher has definitely in mind the facts that can be observed in a stereograph or slide, and has determined the casual relations that explain them, she is ready to guide her pupils to the most profitable study.

Each classification should be carefully studied together with the editor's introduction, observation outline and his comments and suggestions. In approaching any particular lesson, the teacher's knowledge should be at least coextensive with the range of geographic facts included within the stereographs or slides to be used for that lesson.

Not only should the teacher know the points embodied in a single stereograph, but she should have that wider, conceptual knowledge which a type group of stereographs provides, whether the stereographs follow sequentially (see group on salmon, Oregon; or pottery-making, England), or are available through a topical grouping.

The teacher should therefore take out the stereographs and slides, one group at a time, according either to the geographical or the subject classification, carefully examining the stereographs through the stereoscope with a good light and reading the descriptive and technical notes on the back of them; or in the case of the slides, reading the descriptions that are printed on separate slips for each slide.

The teacher will find in the study of this material not only a fascinating employment, but a most effective method of extending her own information on the subjects illustrated, and this addition to her store of knowledge which she could not acquire so readily and effectively in any other way will definitely increase her teaching efficiency.

While the information gleaned through a reading of the descriptive material contained on many of the cards and a careful analytical study of the stereographs may be sufficient to vitalize the teacher's treatment of a topic, it may not be amiss to suggest the possibility of supplementing

such knowledge through reference use of such as the following:

McMurry, *Type Studies,* McMillan Co.
Allen, *Industrial Studies,* Ginn & Co.
Redway, *Commercial Geography,* Scribner's Sons.
Trotter, *Geography of Commerce,* McMillan Co.
Carpenter, *Foods and Their Uses,* Scribner's Sons.
Carpenter, *How the World Is Fed,* American Book Co.
Carpenter, *How the World Is Clothed,* American Book Co.
Tarr, *Elementary Physical Geography,* McMillan Co.
Thornton, *Physiography,* Longmans, Green & Co.
Dodge & Grady, *Geographies,* Rand McNally.
McMurry, *How to Study,* Houghton, Mifflin Co.

A fund of genuine geographic knowledge possessed by the teacher based on traveling, reading and a careful study of stereographs or slides will not only insure an appreciative and intelligent use of the material, but also a varied and accurate knowledge on the part of the class.

WHEN TO USE THE MATERIAL

The use of this visual instruction aid should not be spasmodic nor left to the inspiration of the moment, but should be made a part of the regular school routine so that it will become a habit.

As the aim in using such material is to insure more effective teaching of the facts to be taught, it should be used in the teaching of any lessons that can be made more real and effective by it. The question for the teacher to ask herself daily is—"Can I teach this lesson more effectively with or without the stereographs or slides?" If the

lesson is of such a nature that the stereographs or slides will be of little or no value then she will not use them. But if, on the other hand, they will make for reality and effectiveness in teaching the lesson in hand, she will be unjust to herself and to her pupils if she fails to utilize the material available.

If a school having labored long without an adequate set of maps should come into possession of them and a teacher failed to use them because she was too busy "teaching geography," the explanation would be considered very absurd; yet the situation would be exactly analogous to a teacher who, having available such definite aids to teaching as stereographs and slides, failed to use them because of being too busy teaching by less direct and less effective methods.

A WORKING SCHEDULE ADVISABLE

With his intimate knowledge of the course of study, a principal may make out a practical working schedule assigning the stereographs to certain grades for certain periods each week. Such a schedule will make for regularity in the use of the material, but it should have enough elasticity to permit of the daily application by the teacher of the above question. This will mean that whenever she is teaching geography she should look up the classifications the editors have prepared for different phases of that subject and use the stereographs in some manner if they bear on the lesson. She may use them at the time, or may use them once each week, to illustrate the subjects covered during the week, or at other regular frequent periods according to the particular course of study being followed. Likewise, in history and in other branches, the teacher should first study the classifications to discover what material there is pertaining to the subject of the day's lesson,

and then use the stereographs or slides whenever the subject is one they will illuminate by directly illustrating the topic or by giving a concrete setting of it.

It is very important that some systematic plan should be carried out in the use of both the lantern and the stereoscope. Some use stereographs daily and the lantern once a week with excellent results. If the stereographs are used only once a week, the lantern may be used once every fortnight or at other regular period in a review of the work done since the last lantern exercise, or as an introduction to the next subject to be taken up.

THE LESSON

The lesson is essentially the reaction of the class to the ripened knowledge and teaching material of the teacher, and it may be briefly discussed with relation to the use of this material from a disciplinary and a teaching standpoint.

The behavior of the pupils, the so-called "discipline" of a class is invariably improved through the use of stereoscopic material. Verbalism and memoriter recitations are prime provokers of so-called disorder. Behavior is always a function of the teaching process, and experience proves conclusively that live work growing out of touch with real things, real experiences (and such experiences are gained through the stereoscope) is always conducive to good "order." (With the stereoscope the behavior, though free and spontaneous, is excellent, because it is a well-controlled expression of interest in the work.)

The effectiveness of the teaching in a lesson in which the stereoscope is properly used is largely determined by

(1) the number of pupils that actively participate in the lesson;

(2) the guidance given them as to their observation;
(3) the skill with which the teacher interrogates the pupils with reference to the experiences gained through the stereoscope; and lastly
(4) the amount and kind of expression, oral or written, demanded of the pupil. Consider each briefly:

(1) The Number of Pupils.

As many pupils as possible should use the material. Each of the foregoing schemes for the handling of the stereoscopic material or the lantern slides should be so modified in the light of local conditions as to insure the employment of a maximum number of pupils. Moreover, both prior and subsequent to the formal lesson, there should be ready access to the material.

(2) Guidance in Observation

Pupils, generally, seriously lack training in observation as regards their personal environments. Much more untrained are they in the use of pictures. They look at pictures for the pleasure the pictures give them, but have never been taught how to use pictures—how to look at pictures for information or what kind of information to expect from them. Consequently, the important facts and incidents shown in pictures are so often entirely overlooked by reason of some minor detail of a purely entertaining nature that has caught the attention.

In the use of the stereograph, the child is at an open window looking out into the world of reality with all the wonderful and inexhaustible detail of that world. When the time allowed for study is limited, to get the best results, it is exceedingly important that the child be given some standards of observation to follow and gradually trained to study the scene with a certain, definite purpose in view. The use

of the stereographs in the careful and systematic way above outlined, gives the child valuable and needed training in more intelligent study of all kinds of pictures. The stereograph is so wonderful in its realism and so inexhaustible in its detail, that it holds a supreme place as a medium of intensive study. More than any other kind of illustration, the stereograph stimulates the child's mental activity, conduces to concentration of mind and trains the child to observe, reflect and reason for himself.

While giving the pupils the necessary guidance, however, as to what to look for, leave them plenty of scope for individual observation and experience through which they gain power to see and reason for themselves. Independent observation and reflection by every pupil are greatly needed, because they afford scope for individuality within the graded school system. The stereoscopic material is peculiarly valuable for these purposes, for the intense realism offsets the inertia of silent work and awakens a student's active interest.

The teacher should constantly test the observations of the pupils in order that no misapprehension mar their impressions, thus insuring the formulation of sound generalizations. Thereby, the work may be habitually intense and highly effective, and the pupils will acquire right habits of study.

(3) Interrogating the Pupils.

The questioning by the teacher, when the stereoscope is used, should *assume that the experiences gained through it have the thrill of reality.* Therefore, the questions should differ from those based on an ordinary picture. The teacher may properly ask, In what country are you (or were you)? —referring to the pupils' experience in the stereoscope—In

what direction is (or was) the volcanic peak? How distant does (or did) it appear to be? Such questions have a real significance in terms of a stereograph. The ordinary rules applicable to the question phase of any lesson apply with equal, if not additional, force. The questions should be based on an accurate knowledge of the subject matter under discussion, and, moreover, they should be concise, specific, and sequential.

(4) Oral or Written Expressions.

Lastly, expression, oral or written, is the natural outcome of the acquisition of real experience, and therefore an integral of each lesson should be oral and written expression of impressions gained, conceptions clarified and emotions experienced. To attain this end, as already pointed out, pupils not using the 'scope should be expected to employ themselves making written statements of things learned through the inspection of the stereographs. Moreover, the use of the open text-book for simultaneous, silent reading on the part of the pupils not actively engaged in the examination of a stereograph, in connection with the topic, and for the discovery and study of related pictures in the text-book, insures unflagging industry on the part of the pupils.

May, 1915. (Signed) WILLIAM E. GRADY,
Public School No. 64, New York City.

SYNOPSIS SHOWING GEOGRAPHICAL DISTRIBUTION OF THE 1,000 SPECIAL EDUCATIONAL STEREOGRAPHS OR SLIDES OF

THE WORLD VISUALIZED

AS CLASSIFIED, NUMBERED, INDEXED AND FILED IN THE CASES OR CABINETS

	No. Stereographs or Slides
North America, Nos. 1 to 439	439
United States and Possessions, Nos. 1 to 363:	
New England States and Middle Atlantic States, Nos. 1 to 140	140
Southern States, Nos. 141 to 183	43
Central Western States, Nos. 184 to 278	95
Pacific Coast States, Nos. 279 to 315	37
Possessions, Nos. 316 to 363	48
	363
Other countries of North America, Nos. 364 to 439	76
	439
South America.....Nos. 440 to 494	55
Europe .....Nos. 495 to 784	290
Africa .....Nos. 785 to 838	54
Asia .....Nos. 839 to 981	143
Oceania .....Nos. 982 to 1,000	19
	1,000

The type plan was followed in making the selections and therefore the subjects were chosen from those countries or sections where the particular types could be best exemplified; and only in such measure as was consistent with this aim was any effort made to represent the various countries. Nevertheless, each section of the United States and practically every important country of the world will be found well represented, thus providing the necessary material for geography study by countries; also, the geographical arrangement of the stereographs and slides with index cards is very convenient to the teacher for filing, and forms a simple key basis for the various cross reference classifications.

THE EDITORIAL BOARD

THE WORLD VISUALIZED FOR THE CLASSROOM is the direct outgrowth of the use already made of the Underwood stereographs and slides in the schools. Its preparation has been the work of practical school experts who, out of conviction of the still greater instruction possibilities of the stereograph and lantern slide, have gladly co-operated in the production of the present work.

Needless to say, the names of the authors speak for themselves and give all assurance of the care with which the work has been done, its scientific accuracy, as well as its practical utility in the educational fields it is intended to serve.

Frank M. McMurry, Ph. D., General Editor

Professor of Elementary Education, Teachers' College, Columbia University. Joint author of Tarr & McMurry's Geographies and "Method of Recitation." Author of "How to Study and Teaching How to Study," etc.

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1. TITLE LIST AND GEOGRAPHICAL CLASSIFICATION.

A complete title list of the 1,000 subjects classified according to the political divisions of the world, giving 1,000 references to all sections of the United States, the British Empire and practically every important country of the world.

By William E. Grady, Assistant General Editor

Joint author of Dodge and Grady Geographies. Principal of P. S. 64, one of the largest Public Schools in New York City. Mr. Grady has been making stereographs a practical and important feature in the work of his school of sixty-two classrooms for several years.

2. AGRICULTURE CLASSIFICATION.

272 subjects to which 314 references are made to illustrate the different phases of agriculture in the various countries of the world, classified in accordance with the natural order that would be used in teaching the subject, beginning with the soil formation, followed in order by drainage, cultivation of crops, live stock production, manufacture of agricultural products, etc. Both modern and primitive methods are included.

By Homer C. Price, M. Sc.

Dean of the College of Agriculture, Ohio State University.

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3. ANIMALS CLASSIFICATION.

134 subjects selected to show various animals from the different parts of the world, both Wild and Domestic, with 143 references to them, together with helpful notes on each kind of animal shown,—a series very valuable for lower grades.

By John Burroughs, Litt. D.

Author of "Wake Robin"; "Birds and Poets"; "Locusts and Wild Honey"; "Indoor Studies"; "Signs and Seasons"; "Squirrels and Other Fur Bearers"; "Bud and Bough"; "Camping and Tramping with Roosevelt," etc.

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4. ARCHITECTURE CLASSIFICATION.

258 subjects to which 366 references are made to illustrate specimens of Architecture classified according to the different schools of architecture, national characteristics and special classes of buildings, such as cottages, palaces, Government Buildings, Cathedrals, etc.

By James Knox Taylor, F. A. I. A.

Director of Department of Architecture, Massachusetts Institute of Technology.

5. BIOGRAPHY CLASSIFICATION.

804 subjects to which 4,454 references are made to illustrate the lives of great men and women, classified chronologically under the different countries, and replete with notes and practical suggestions.

By Robert Swickerath, S. J.

Librarian and Professor of Pedagogy, Holy Cross College, Worcester, Mass.

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6. BOTANY CLASSIFICATION.

271 subjects to which are made 354 references illustrating matters of interest to students of Botany and classified under such headings as Plant and Animal Relations, Parts of a Flowering Plant, Spore Bearing Plants, Important Families of Seed Bearing Plants, Plant Association, etc.

By Elliot R. Downing, Ph. D.

Assistant Professor of Natural Science, School of Education, the University of Chicago. Editor of "The Nature Study Review."

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7. CHILD LIFE CLASSIFICATION.

112 subjects to which 112 references are made to show children at work, in school, and at their games and pastimes in all parts of the world. Excellent for the lower grades.

By E. A. Kirkpatrick, M. Ph.

Director of Child Study Department, State Normal School, Fitchburg, Mass. Fellow A.A.A.S. Author of "Inductive Psychology," "Fundamentals of Child Study," "Genetic Psychology," "The Individual in the Making."

8. CITIES AND CITY LIFE CLASSIFICATION.

362 subjects to which 1,001 references are made to illustrate the different characteristics of cities, as these vary according to size, location and their educational and commercial interests.

By J. A. C. Chandler

Superintendent of Schools, Richmond, Virginia. Editor, Virginia Journal of Education. Lecturer, Virginia Summer School of Methods. Author of "Representation in Virginia," "History of Suffrage in Virginia," "Geography of Virginia," "Makers of Virginia History," "Makers of American History," etc.

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9. CIVIC BETTERMENT CLASSIFICATION.

175 subjects to which are made 224 references to illustrate the contrasts of interest to students of Civic Betterment problems, such as good and bad street paving, lighting and traffic regulations, etc. The material is classified under city planning, streets, buildings, water-fronts, parks, monuments, bridges, tenements and factories, with full critical notes.

By E. H. Bennett

Consulting Architect, Chicago, Ill.

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10. ENGLISH COMPOSITION CLASSIFICATION.

887 subjects selected because of their great suggestiveness, to which the author has made 1,043 references, according to the way the subjects best lend themselves for use in composition work. Classification is made under three main headings, of Narration, Description and Exposition, and sub-classified under various topics and supplied with helpful notes and practical suggestions for use.

By James Fleming Hosic, Ph. M.

Secretary of the National Council of Teachers of English, Head of English Dept. in Chicago Normal School. Author of "Elementary Course in English." Editor of "English Journal."

11. GEOLOGY CLASSIFICATION.

239 subjects to which are made 472 references to illustrate dynamical, structural, and physiographical Geology, classified in accordance with the way their different aspects are treated in the best modern text-books.

By Albert Perry Brigham, Ph. D.

Professor of Geology, Colgate University. Associate Editor of Bulletins of American Geographic Society. Author of "A Text-book of Geology," "Introduction to Physical Geography," "Students' Laboratory Manual of Physical Geography," "Geographic Influences in American History," "From Trail to Railway Through the Appalachians," "Commercial Geography," etc.

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12. GENERAL HISTORY CLASSIFICATION.

290 subjects to which 370 references are made to illustrate the events of ancient, mediæval and modern history of all countries except the United States.

By Henry E. Bourne, L. H. D.

Professor of History, Western Reserve University, Cleveland, Ohio. Author of "Teaching of History and Civics," "Mediæval and Modern History," etc. Editor of Leckey's "French Revolution."

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13. HISTORY OF AMERICA CLASSIFICATION.

439 subjects to which 735 references are made to illustrate the important events in the history of the United States. These are arranged chronologically by epochs, as history is taught in the schools, from the time of the cliff dwellers to the present day.

By Charles Fordyce, Ph. D.

Dean of Teachers' College, University of Nebraska.

14. HOMES AND LIFE OF THE PEOPLE CLASSIFICATION.

515 subjects to which are made 638 references to show homes and home life in all parts of the world, characteristic homes in special groups, such as primitive Homes, City Homes, Country Homes, Homes of Rulers, etc.

By Ada Van Stone Harris

Director of Elementary Teaching, Pittsburgh. Formerly Asst. Supt. of Schools, Rochester, N. Y., and Richmond, Va., Formerly President of the Elementary Dept. of the N. E. A., also Vice-President of the N. E. A.

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15. HOME ECONOMICS CLASSIFICATION.

302 subjects to which are made 323 references of interest to students of Home Economics. Under the headings of "Household Science" and "Household Arts," there is classified a wide range of material under agriculture, markets, foodstuffs, clothing, fuels, industries; including copious notes and practical suggestions for use.

By Isabel Bevier, Ph. M.

Professor of Household Science and Director of Courses, University of Illinois. Author of "Home Economic Movement," "Food and Nutrition," "Selection and Preparation of Foods," "The House Plan, Decoration and Care," etc.

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16. LITERATURE CLASSIFICATION.

269 subjects of the 1,000 list to which 429 references are made (also 363 supplemental subjects not in the 1,000 list, to which 433 references are made). The selections here are made to illustrate the literature of the leading school readers and college entrance requirements, and the references are made under classified divisions such as American Authors, English Authors and Authors of non-English speaking countries.

By W. W. Charters, Ph. D.

Dean of School of Education, University of Missouri. Author of "Methods of Teaching."

17. MANUAL TRAINING CLASSIFICATION.

173 subjects to which are made 176 references classified under three main headings:

I. Fundamental Handicraft. II. Building Construction and Materials. III. Machinery and Metals.

The series contains much material that is especially choice and very difficult to obtain in any other way.

By Charles Bennett, B. S.

Professor of Manual Arts, Bradley Polytechnic Institute, Peoria, Illinois. Editor of "Manual Training Magazine" and of "Vocational Education."

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18. MYTHOLOGY CLASSIFICATION.

53 subjects of the 1,000 list to which 69 references are made (also 113 supplemental subjects not in the 1,000 list to which 150 references are made), selections covering a wide field to illustrate mythological references and allusions the student is most likely to meet in his reading of either modern or ancient literature; contains material of especial value in lower grade work, enabling the teachers to make concrete to the pupils the fine old tales of Greece and Rome, and only less fully those of Norse, Teutonic and Oriental origin.

By Emilie Kip Baker

Author of "Out of the North Lands"; "Stories from Northern Myths"; "Poems for School Days," etc.

19. NATURE STUDY CLASSIFICATION.

387 subjects selected because of their marked value in the elementary study of nature, with 779 references to illustrate plant and animal life and physical phenomena. The material is classified in full detail and with copious notes and suggestions for use.

By Elliot R. Downing, Ph. D.

Assistant Professor of Natural Science, School of Education, University of Chicago, Editor of "The Nature Study Review."

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20. PHYSICAL GEOGRAPHY CLASSIFICATION.

439 subjects to which are made 900 references to illustrate every important detail in Physical Geography, arranged for use with any of the modern text-books, and classified under more than 75 different headings; takes the student into the field and enables him to study at first hand the wonderful developments of the earth and its attendant phenomena.

By Wallace W. Atwood, Ph. D.

Professor of Physiography, Harvard University. Geologist, U. S. Geological Survey. Fellow Geological Society of America. Author of "Physical Geography of the Devil's Lake Region," "Interpretation of Topographic Maps," "Mineral Resources of Southwestern Alaska," "Geology and Mineral Resources of the Alaskan Peninsula," etc.

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21. PRODUCTS AND INDUSTRIES CLASSIFICATION.

343 subjects to which are made 366 references showing the most important products and factory processes employed in the great industries of the world, classified and sub-classified under the main headings: Food, Clothing, Mining and Manufacturing, Quarrying, Lumbering and Forest Products, Irrigation, etc.

By R. H. Whitbeck, Ph. D.

Associate Professor of Physiography and Geography, The University of Wisconsin, Madison, Wis. Editor of the "Journal of Geography," "The Geography and Industries of Wisconsin."

22. RACES OF MANKIND CLASSIFICATION.

251 subjects to which are made 251 references to illustrate the various branches and sub-branches of the human family—their adaptation in dress, occupations, homes, use of implements and in industrial processes.

By Frederick Starr, Ph. D., Sc. D.

Professor of Anthropology, University of Chicago. Author of "Congo Natives"; "Liberia"; "Indians of Southern Mexico"; Notes on Ethnography of Southern Mexico"; "Japanese Proverbs and Pictures"; "The Ainu Group"; "Filipino Riddles"; "Strange Peoples"; "American Indians"; "On the Hills" (Geology for young people); "Some Footsteps in Human Progress"; "In Indian Mexico"; "The Truth About the Congo," etc. Editor "The Anthropological Series." Foreign awards: Officer of Order of Leopoldi (Holland); Palms of Officer of Public Instruction (France); Chevalier Order of Crown of Italy.

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23. TOPICS FOR THE GRADES CLASSIFICATION.

968 subjects to which are made 1,948 references under the different countries to illustrate topics found in most school geographies, classified first geographically then alphabetically, according to subject.

By Richard Elwood Dodge, A. M.

Professor of Geography, Teachers' College, Columbia University. Author of "The Teaching of Geography in Elementary Schools," "Dodge's Geographies," "Reader of Physical Geography for Beginners," etc. Editor of "Annals of Association of American Geographers."

24. TRANSPORTATION CLASSIFICATION.

381 subjects to which are made 447 references showing the various forms of transportation in every part of the world, both modern and primitive. Everything from dog and ox teams to the automobile—from the primitive dug-out to the great "ocean greyhound," and from the ancient "ship of the desert" to the modern aeroplane; also a special series on the transportation of ore.

By W. M. Gregory

Professor of Geography, Normal Training School, Cleveland, Ohio. Contributing Editor to "The Journal of Geography."

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25. ZONE LIFE AND ITS MODIFICATIONS CLASSIFICATION.

640 subjects to which are made 2,250 references to illustrate animal and vegetable life in the several zones of latitude, together with the varied modifications caused by elevation, monsoons, trade winds and ocean currents, accompanied by notes and practical suggestions for use.

By Ellsworth Huntington, Ph. D.

Assistant Professor of Geography, Yale University. Explorer in Turkestan, Persia, Syrian Desert, India, China, Siberia. Author of "Explorations in Turkestan," "The Pulse of Asia," "A Geographic Reader," "Palestine and Its Transformation," "The Climatic Factor," etc.

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DIRECTORY OF 1000 PLACES

TO BE SEEN THROUGH THE STEREOSCOPE AND IN LANTERN SLIDES

GEOGRAPHICAL CLASSIFICATION

INCLUDING POLITICAL GEOGRAPHY

By WILLIAM E. GRADY, Principal of Public School No. 65
New York City, N. Y.

There is given below a complete list of 1000 subjects arranged geographically, following the usual order of school texts. It will be noticed that in the selection and arrangement of material, the largest and most important place is given to our own country and its possessions, although the rest of the world is covered in a thoroughly representative manner. The different headings and sub-headings are identical with those on the index cards in the filing cases. The first numbers given below are the serial numbers; the large numbers are the negative numbers which serve as the most certain means of identifying each subject. On the stereographs and slides themselves, the serial numbers are found on the upper right-hand corner, preceded by the letter "S." Any other numbers should be ignored.

In this classification, the titles are given in full and exactly correspond to the titles on the stereograph cards and slides; whereas in the cross-reference classifications following this geographical arrangement, the titles are abbreviated and only serial numbers are used.

Through the simplicity and convenience of this geographical arrangement of the stereographs and slides in the files corresponding to the classifications of the whole title list, the teacher will be able to gain a knowledge of all the different parts of the earth to which the stereographs or slides give access. It is an excellent plan to place the serial numbers on the regular school maps of the countries in their appropriate places. This will help the teacher to keep in mind the ma-

terial for use as each country is studied and will fix in the minds of both teacher and scholars the location of each place seen in the stereoscope or by the lantern slide.

When using the stereograph it is most important that the teacher should see these places for himself through the stereoscope. Only in this way can one realize to what an extent the world can be reached from the classroom. It is important also that he should think as little as possible of the small apparatus and remember that the stereographed scenes through the stereoscope are life-size to the eye and mind, and, moreover, that it is natural and easy for children and adults, in using the stereoscope, to pass from the experience of seeing a picture to the experience of seeing and being in the presence of the place itself.

In the following list the numbers preceded by a star (*) are the ones included in the SPECIAL 600 series.

Publisher's Note.—When further illustrations on any subject or country are desired, reference should be be made to the extensive material in our general catalogue and to our regular complete country tours, full information about which will be promptly supplied on request.

NORTH AMERICA

(439 *stereographs or lantern slides*)

UNITED STATES AND POSSESSIONS

(363 *stereographs or slides*)

NEW ENGLAND STATES

(28 *stereographs or slides*)

MASSACHUSETTS—*25 stereographs or slides*

1—11155 Bunker Hill Monument, one of America's proudest memorials, Boston.

*2—10740 The State House crowning historic Beacon Hill, W. from old Common, Boston.

*3—10742 Old South Church, Washington St., scene of "Tea Party," 1773 (N.), Boston.

*4—11218 Faneuil Hall, Boston, looking west from Quincy Market to Beacon Hill.

*5— 5252 The Cradle of Liberty, Faneuil Hall, scene of historic assemblies, Boston.

6—11156 Public Library, one of democracy's great institutions, Boston.

*7— 5261 Stately old home of Longfellow, once Washington's headquarters, Cambridge.

8— 5259 Elmwood, birthplace of James Russell Lowell, Cambridge, Mass.

9—10704 North Bridge and statue of the "Minute Man" on old battleground, Concord.

*10—11499 In the desolate waste of sand dunes on Cape Cod, Mass.

11—11498 How a forest planted as a windbreak is being buried by drifting sand, Cape Cod, Mass.

12— 5268 What "Captains Courageous" bring home; cleaning codfish on a Cape Ann wharf, Gloucester.

13— 5267 "Fish out of water," drying cod from Grand Banks on racks at a Cape Ann Wharf, Gloucester.

14—10705 The Reef of Norman's Woe, scene of the "Wreck of the Hesperus," Cape Ann.
*15—11158 Expert workmen cutting leather, Shoe Factory, Lynn, Mass.
*16—11159 Workmen welting shoes by machinery, Mass.
17—11219 Assorting wool into three grades prior to its manufacture into cloth.
*18—10790 Feeding wool into a carding machine.
*19—10793 Spinning machine, showing bobbins and spools.
*20—11220 Twister at work in Assobat Woolen Mills, Mass.
21—11221 Foster winding in Assobat Woolen Mills, Mass.
*22—10796 Warping machine at work in a big up-to-date woolen mill.
23—10797 Drawing in, preparatory to actual weaving of a woolen fabric.
*24—10798 General view of largest weaving room in America.
*25—11160 Falls on Merrimac providing power for New England Mills, Lawrence, Mass.

NEW HAMPSHIRE—3 *stereographs or slides*

26—11224 The home of Daniel Webster, Franklin, N. H.
*27— 5242 In the charming White Mountains—Mt. Pleasant, Mt. Stickney, and the winding Ammonoosuc River, N. H.
*28—11161 Granite quarries, with derricks, cars and finished blocks, Concord, N. H.

MIDDLE ATLANTIC STATES

(99 *stereographs or slides*)

NEW YORK STATE—51 *stereographs or slides*

New York City—24 *stereographs or slides*

*29—10709 Castle Garden (Aquarium), S. W. over Liberty Statue and Harbor, N. Y.
*30—10708 Towering temples of trade crowding lower Manhattan, N. from N. Y. harbor.
*31— 5291 From Brooklyn Bridge west—great skyscrapers, financial district of N. Y. City.
*32— 5289 The wonder of the age, Brooklyn Bridge from the World Building, N. Y.

*33— 5277 Looking north up West Street over Ocean steamship docks and Hudson River, N. Y.

34—10721 From Flatiron Building, N. E. past Madison Sq. Garden to Queensboro Bridge, N. Y.

35—10723 Lower Manhattan, from Metropolitan Tower S. to Singer Building, N. Y.

36—10168 Singer Building (47 stories) and City Investing Building (13 acres floor), N. Y.

37—11403—Woolworth Building, tallest in the world, product of five- and ten-cent pieces, N. Y. City.

*38—10713 Wall Street W. past U. S. Sub-Treasury to old Trinity Church, New York.

39— 5308 Broad Street, north to the Stock Exchange, U. S. Sub-Treasury and Wall Street, N. Y.

*40—10724 Herald Sq. N. over 6th Avenue elevated R. R. and up Broadway to Times Building.

41— 5320 Palatial homes and hotels of upper Fifth Avenue, N. toward Central Park.

*42— 5313 Street peddlers' carts on Elizabeth Street—looking north from Hester Street, N. Y.

*43—11162 Building one of New York's greatest skyscrapers, showing steel framework.

*44— 5286 New Jersey ferryboat bringing morning business crowds into New York City.

*45—11163 Where millions enter America, Immigrant Station, Ellis Island, New York.

46— 5288 Immigrants just arrived, awaiting examination, Ellis Island, New York Harbor.

*47—11164 U. S. Inspectors examining eyes of immigrants, Ellis Island, New York Harbor.

*48—10733 Warships and pleasure craft in the Hudson below Riverside Park (N.), New York.

*49—11504 Work of a glacial age—30-ton boulder left on glacier grooved native rock, Bronx Park.

50—11471 Atlantic walrus ("whale horse") relative to seal and sea lion, Bronx Park, N. Y. City.

51—11475 American beaver, busy craftsman of the woods, enjoying a breakfast of maplewood.

52—11474 Beaver dam 40 feet long, built by beavers in Beaver Pond, Bronx Park, N. Y.

(NOTE.—For other animals in Bronx Park, see East Africa and Congo.)

Hudson Valley, N. Y.—6 stereographs or slides

(NOTE.—For Palisades, see New Jersey.)

53—11225 Electric locomotive and train with overhead cables, N. Y., N. H. & H. R. R., New York.

*54— 5380 Looking N. up Hudson River from grounds of U. S. Military Academy, West Point.

55— 5391 Volley Fire Drill—Cadets, West Point Military Academy.

*56—11165 Washington's headquarters (1783) at Newburgh, New York.

*57—11166 High Bridge across Hudson, from deck of river boat, Poughkeepsie, N. Y.

58—11227 Splendid State Capitol (cost $23,000,000.00), looking west, Albany, N. Y.

Long Island, N. Y.—6 stereographs or slides

59—11167 Digging potatoes by hand on a truck farm, Long Island, N. Y.

*60—11228 Curtis, in his bi-plane, just ready for flight, Long Island, New York.

*61—11230 Life-saving corps with boats, ready for action, Long Island beach.

62—11231 Looking out on the boisterous waves of the Atlantic from Long Island.

*63—11232 Skinning whale to get at blubber, Long Island beach.

64—11233 Head of whale, showing great mass of whalebone, Long Island beach.

Central New York—4 stereographs or slides

65— 5485 Fairy Cascade, Watkins Glen, New York.

*66—10803 Milk in the separating room passing over refrigerating pipes of a dairy.

*67—10781 Churn that works and salts its own butter—a great invention for the dairy.

68—10785 Making up butter in pound packages at a model dairy.

Niagara Falls—11 stereographs or slides

*69— 5451 "Niagara, thou eternal drop from God's right hand!"

70— 5400 Majestically grand, the falls from the Maid of the Mist, Niagara.
*71— 5407 Tireless Niagara—Horseshoe Falls from above.
*72— 5403 Marble whiteness of the seething waters—American and Luna Falls, Niagara.
73— 5404 An old Niagara Guide—looking into the awe-inspiring Cave of the Winds.
74— 5402 Nature's everlasting smile (S. E.) in rapids above Niagara Falls.
75— 5425 Great mass of frozen spray and ice-bound American Falls, Niagara.
*76— 5456 The Whirlpool Rapids from the Steel Bridge, Niagara Falls.
*77— 5408 Autumn beauties along Niagara's precipitous banks, looking up toward the Falls.
*78— 5466 Dynamos 5,000 horse-power, 25 revolutions per second, 2,200-volt current.
*79— 5419 A drive through a forest of crystal, Prospect Park, Niagara Falls.

NEW JERSEY—*26 stereographs or slides*

*80—11226 Looking north along the precipitous Palisades, Hudson River.
81—11237 Great escalator carrying wagon-loads of freight on Bergen Hill, New Jersey.
82—10707 Palatial hotels and crowded promenade (S.) along the beach, Atlantic City.
*83— 5500 Life on the ocean wave, Atlantic City, N. J.
84— 6950 A glorious May-day among the daisies.
85—11169 Fighting huge fire, Standard Oil Tanks, Bayonne, New Jersey.
*86—11238 White-robed workmen milking in model stable, Fairfield Dairy, N. J.
*87—11239 Milk bottles in great steam sterilizer, Fairfield Dairy, N. J.
*88—11240 Filling and stopping twelve milk bottles at once, Fairfield Dairy.
*89—11490 Sugar after leaving vacuum pan, before entering mould, Sugar Refinery, Jersey City.
90—11491 Filled moulds standing 48 hours to crystallize, Sugar Refinery, Jersey City.

*91—11492 Moving drying pans, where each Domino sugar plate travels for two days, Jersey City Refinery.

Silk Manufacture—13 *stereographs or slides*

92—11436 Winding the fine raw silk in a large American Silk Throwing Plant, Paterson.

*93—11437 Machines that double and spin threads for warp, Silk Throwing Plant, Paterson.

94—11439 Reeling and lacing silk, preparing skeins for weavers or dyers, Silk Throwing Plant, Paterson.

*95—11442 Stripping and dyeing skeins in an immense silk dyeing works, Paterson.

*96—11441 Weighting and washing silk skeins preparatory to dyeing in factory at Paterson.

97—11443 Finishing silk skeins after dyeing and making into bales to send to weavers, Paterson.

*98—11446 Warping view in a great silk weaving plant, Paterson.

*99—11449 Weaving plain silk cloth—hundreds of automatic looms in a modern American silk mill, Paterson.

100—11452 Dyeing silk in the piece, in a mammoth silk dyeing works, Paterson.

*101—11453 Printing color designs on silk cloth—10 colors at once—in a great silk dyeing works, Paterson.

*102—11456 Finishing processes for silk cloth, breaking, folding and pressing in a silk dyeing works, Paterson.

*103—11457 In the folding and making up room—rolls of finished silk ready for the market, Silk Works, Paterson.

104—11460 Weaving soft taffeta ribbons with printed warp and plain woof, Paterson.

105—11410 Cross section of Pennsylvania R. R. tubes under the Hudson River, showing concrete flooring.

PENNSYLVANIA—*22 stereographs or slides*

106— 5510 Independence Hall, where Declaration was signed in 1776, Philadelphia.

*107— 5561 "High-water mark" of Civil War and view south to Round Top, Gettysburg, Pa.

*108— 5516 The Delaware Water Gap—where the Delaware River cuts through a mountain range.

*109—11241 Typical coal breaker with culm heaps, anthracite fields, Scranton.

*110—11255 Coal strata and miner drilling for a blast in an anthracite mine, Scranton.

*111—11257 Hauling out the cars of coal by electric motor, Anthracite Mines, Scranton.

*112—11254 Coal on way to breakers to be broken into regular sizes, Anthracite Mines, Scranton.

113—11256 On the slope to the mine—empty cars returning to be filled, Anthracite Mines, Scranton.

*114—11258 Boys picking slate in a great coal breaker, Anthracite Mines, Scranton.

*115—11259 Coal breaker and automatic slate pickers in action, Anthracite Mines, Scranton.

116—11260 Miners and breaker boys ready for home after day's work, Anthracite Mines, Scranton.

*117— 5540 Famous "Horseshoe Curve" among the Alleghenies Mountains (2,571 feet long, 1,200 feet across, grade 89 feet).

118— 5532 Johnstown Calamity—wreck of the Day Express, P. R. R., Conemaugh, Pa.

*119— 5524 Steel works. famous source of gigantic fortunes, Homestead, Pa.

120— 5520 Red-hot iron flowing from blast furnace, ready for making into pig-iron and steel, Pa.

*121— 5523 Steel beam, red-hot, drawn out 90 ft. long—steel works at Pittsburgh.

122— 5525 Plate Glass Works, Tarentum, Pa.—modeling clay pots for molten glass.

*123— 5526 Glass-making—drawing pot of red-hot liquid from the glowing furnace.

*124— 5528 Glass manufacture—Tarentum, Pa.—casting and rolling sheets of plate glass.

*125— 5527 Glass making, Tarentum, Pa., revolving iron disks grinding surface of plate glass.

*126— 5529 Workmen finishing plate glass windows in polishing room—Glass works, Tarentum, Pa.

*127— 5535 Source of gigantic fortunes—oil wells in Pennsylvania.

DISTRICT OF COLUMBIA—13 *stereographs or slides*

Washington, D. C.—13 *stereographs or slides*

*128—11145 Down Potomac River from Washington, Washington Monument at left.

*129— 5581 From Monument N. to White House, Treasury and State Department, Washington.

*130— 5584 From Washington Monument (E.) over Agricultural Grounds to the Capitol, Washington.

*131— 5605 From Navy Department (S. W.) past the White House to the Capitol, Washington.

*132— 5585 United States Capitol from the N. E.; most beautiful building in America.

133— 5587 The supreme moment, Chief Justice Fuller administering the oath to President McKinley, March 4, 1901.

*134— 5588 A joint session of Senate and House of Representatives, Washington.

135— 5590 Supreme Court Room in the Capitol-seat of Chief Justice, Washington.

136— 5592 Decorative splendor of entrance hall, Congressional Library, Washington.

*137— 5595 The White House, the historic residence of the Nation's Chief—north front, Washington, U. S. A.

*138—11348 President Wilson and his Cabinet in regular session, Executive office, Washington, D. C.

139— 5601 Admiral Dewey and officers of the navy, at New Year reception, 1902, White House, Washington.

140—11146 Printing Millions of U. S. money, Bureau of Engraving, Washington.

SOUTH ATLANTIC STATES

(29 *stereographs or slides*)

VIRGINIA—8 *stereographs or slides*

141— 5614 General Robert E. Lee's old home, Arlington, Va.

142— 5617 Christ Church, where Washington joined with his neighbors in worship, Alexandria, Va.
*143— 5618 Home of Washington preserved in memory of the Republic's founder, Mt. Vernon, Va.
144—10577 The Wright aeroplane in flight, Fort Myer, Va.
145—10051 U. S. battleships (Connecticut in lead) steaming out to sea, Hampton Roads, Virginia.
146— 5656 One of Nature's curiosities, the Natural Bridge, Rockbridge Co., Va.
147—11209 Nature's fantastic decorations, picturesque Luray Caverns, Virginia.
*148—11210 Mammoth stalagmites and stalactites, Luray Caverns, Virginia.

NORTH CAROLINA—3 *stereographs or slides*

*149— 5658 In a great pine forest—collecting turpentine, North Carolina.
*150— 5662 "Sweating out" tar from pine wood in the turf-covered Tar Kiln, N. C.
*151— 5659 Distilling turpentine from the crude resin—in the Pine Forests of North Carolina.

SOUTH CAROLINA—7 *stereographs or slides*

152—11211 Looking E. on great government dike, on coastal plain, Georgetown.
*153— 5669 Where the Civil War began—Fort Sumter in Charleston Harbor, S. C.
*154— 5671 The Carding Room, great Olympian Cotton Mills, Columbia, S. C.
155— 5674 Drawing Frames in the great Olympian Cotton Mills, Columbia, S. C.
*156— 5670 In a great spinning room (104,000 spindles), Olympian Mills, Columbia.
*157 5672 Warping room in the great Olympian Cotton Mills, Columbia, S. C.
*158— 5673 Weaving room (2,400 looms), great Olympian Cotton Mills, Columbia, S. C.

GEORGIA—3 *stereographs or slides*

*159— 5680 The greatest resin market in the world—loading ocean vessels, Savannah, Ga.

*160— 5678 Cotton is king—plantation scene with pickers at work, Georgia.
161—11147 Cotton seed delivered at mill where oil is extracted, Georgia.

FLORIDA—8 *stereographs or slides*

162— 5682 Oldest house in the United States, built by the Spanish about 1564, St. Augustine, Florida.
163— 5697 "And the palm tree nodded to the mirror in the jungle," Ormond.
*164— 5709 Automobiles on the world's finest race track, Ormond-Daytona Beach.
*165— 5703 Pelican Islands, Florida—"City of Refuge" for pelicans—protected by Uncle Sam.
*166— 5710 Hauling logs over the pine-grown sand levels at Daytona, Florida.
*167— 5700 Cocoanut trees in the white sands at Palm Beach, Florida.
*168— 5698 Blossoms of the Cocoanut Palm—fruit in all stages.
*169—11149 Enjoying life in wheel chairs amid tropical scenes, Palm Beach, Fla.

GULF STATES

(14 *stereographs or slides*)

ALABAMA—2 *stereographs or slides*

*170—11150 Colored students plowing at Tuskegee Institute, Tuskegee, Alabama.
*171—11151 Booker T. Washington and distinguished guests, Tuskegee Institute.

MISSISSIPPI—1 *stereograph or slide*

172— 5743 Rapid Transit in Southern Mississippi.

LOUISIANA—3 *stereographs or slides*

*173— 5750 The sweetest spot on earth—sugar levee beside the Mississippi, New Orleans, La.
*174—11212 Busy ship-crowded wharves on the Mississippi, New Orleans.
175—11214 Great dike on the Mississippi along the delta, near New Orleans.

TEXAS—8 *stereographs or slides*

176—11215 Acres of floating wreckage after the flood, Galveston, Texas.
*177— 7723 Cotton Gins—one of the greatest industrial inventions—separating fibre from seed, Texas.
*178— 7722 Baling cotton—a powerful press just releasing a 500-lb. bale—at a mill in Texas.
179— 8086 Shipping cotton from levee near growing district by cars to manufacturing centre, Texas.
*180— 7721 A part of the 4,000,000 bale yearly cotton crop of Texas.
*181— 9797 Harvester cutting rice on a big plantation in Texas.
*182— 9796 Hauling rice to the thresher—showing canal from which growing crop is flooded.
183— 9798 Steam thresher at work in a rice field, preparing crop for the mill.

CENTRAL WESTERN STATES

(11 *stereographs or slides*)

TENNESSEE—1 *stereograph or slide*

184— 5745 Confederate signal station, Lookout Mountain (view N.), Chattanooga.

KENTUCKY—2 *stereographs or slides*

185—11216 Great havoc wrought by a tornado, Louisville, Ky.
*186—10514 The birthplace of Abraham Lincoln, Hodgensville, Ky.

MISSOURI—5 *stereographs or slides*

*187—11213 Typical end-wheeler on the Mississippi, St. Louis, Mo.
*188— 5813 On the bustling levee, St. Louis, where the products of the Mississippi Valley are distributed.
*189— 5811 Street scene (Broadway N. from Chestnut St.), St. Louis, Mo.

190— 9446 The flood in Kansas City, Mo.
191—11217 Tame deer on the U & U ranch, Missouri.

OKLAHOMA—1 *stereograph or slide*

*192—11506 Home life of the Sax and Fox Indians, showing sleeping papoose, S. & F. Reservation, Oklahoma.

KANSAS—1 *stereograph or slide*

*193— 5803 In the great cornfields of Osage Valley (N.), eastern Kansas.

NEBRASKA—1 *stereograph or slide*

*194—11505 Feathered and mounted braves of the warlike Sioux Indians, Nebraska.

GREAT LAKE STATES

(40 *stereographs or slides*)

OHIO—5 *stereographs or slides*

*195— 7962 Piles of iron ore between docks of Lake steamers and railways to mills, Cleveland.
*196— 7965 Unloading iron ore from lake vessels—old and new methods, Cleveland.
197— 7960 Docks, switchyards and one-ton buckets for lifting iron ore from ships to cars, Cleveland.
*198— 7963 Unloading an ore steamer at Cleveland, O.—lowering a 5-ton electric clam into the hold.
*199— 7964 Electric unloader lifting 5 tons of iron ore from vessel's hold to docks, Cleveland, Ohio.

MICHIGAN—12 *stereographs or slides*

*200— 5796 Twentieth Century harvesting machine, cutting and binding corn in a Michigan farmer's field.
*201— 5798 Prize winning sheep (Shropshires) in a Jackson County pasture, Michigan.
202—11154 Typical scene along the eastern shore of Lake Michigan.

*203— 7958 Pockets of iron ore (160 tons each) on long dock ready for shipment, Escanaba, Mich.

*204— 7971 Shaft houses and machine shops above the richest copper mines on earth, Calumet, Mich.

205— 7973 Copper in bars and plates leaving the smelters of the Calumet and Hecla Mines, Mich.

*206— 7993 Looking W. toward Lake Superior over locks and vessels in ship canal, Sault Ste. Marie.

207— 7994 Whaleback freighters of ore and grain in canal, Sault Ste. Marie.

*208— 7996 "Down-Lockage" in canal (letting water through gates to equalize level), Sault Ste. Marie.

209— 7950 Gigantic crusher and spouts feeding it with iron ore from the mine, Escanaba, Mich.

*210— 9807 Diffusion batteries where juice is extracted from sugar beets, Menominee, Mich.

*211— 9808 Evaporators where purified beet juice loses water by cooking and becomes syrup, Mich.

ILLINOIS—*7 stereographs or slides*

*212— 5760 One of the busiest streets in the world—State Street, Chicago, Ill.

*213— 5769 Cattle in the great Union Stock Yards, the greatest of live-stock markets, Chicago.

*214— 5773 A half mile of pork in Armour's great packing house, Chicago, Ill.

*215— 5785 Loading a great whaleback ship at the famous grain elevators of Chicago.

*216— 5790 Ploughing on a prairie farm in Illinois.

217— 5791 How grass and sunshine are turned into beef—steers grazing in green pastures, Illinois.

*218— 5793 Genuine corn-fed pork—feeding hogs in a prairie pasture, Illinois.

WISCONSIN—*5 stereographs or slides*

*219— 7981 Cutting logs ready for stripping and making into pulp, paper mill, Marinette, Wis.

*220— 7982 Pulp made of wood from northern forests, ready to make into paper, mill at Marinette, Wis.

*221— 7983 Wood pulp in big sheets ready for making into paper, Marinette, Wis.

*222— 7984 Making wrapping paper out of wood pulp, 250 feet per minute, Marinette.

*223— 7987 Looking up beautiful Dalles of Wisconsin River beyond Romance Cliff.

MINNESOTA—11 *stereographs or slides*

224— 7976 Scouring logs and hauling them up the slip into the saw-mill at Minneapolis, Minn.

*225— 7977 Enormous piles of lumber seasoning previous to shipment—yard at Minneapolis, Minn.

*226—11104 St. Anthony Falls, where power is produced for great flour mills, Minn.

227— 7952 "Open pit" iron mining with 5-ton steam shovels, Hibbing, Minn.

*228— 9802 Digging iron ore with steam shovel and dumping on train, open pit iron mine, Minn.

*229— 7953 A five-ton steam shovel and its crew in an "open pit" iron mine at Hibbing, Minn.

230— 7946 Miners far down underground in Sellers' Iron Mine, Hibbing, Minn.

*231— 7948 Dragging cars of iron ore through subterranean passages to the shaft, Hibbing, Minn.

*232— 7947 Iron miners at work in an underground "drift," Sellers' Mine, Hibbing.

*233— 7957 Docks with two-mile frontage, holding 200,000 tons of iron ore, Two Harbors, Minn.

*234— 7959 Aboard a Lake steamer loading with iron ore by chutes from gigantic docks, Duluth, Minn.

ROCKY MOUNTAIN STATES
(*44 stereographs or slides*)

WYOMING—9 *stereographs or slides*

Yellowstone Park—9 *stereographs or slides*

235— 6244 Six-horse tally-ho leaving mountain-walled Gardiner for trip through Yellowstone Park, U. S. A.

*236— 6246 Fort Yellowstone, among the mountains, headquarters of U. S. troops, Yellowstone Park.

*237— 6247 A Mountain of "Petrified Water"—Pulpit Terrace and Mammoth Springs Hotel, Yellowstone Park.

*238— 6250 Wild Buffalo, one of America's "first families," at home on a sunny slope, Yellowstone Park.

239— 6255 Grizzly bear at home in the wooded wilderness of famous Yellowstone Park.

240— 6262 Peering into the mysterious crater of "Old Faithful" between its eruptions, Yellowstone Park.

*241— 6263 The most famous sight in Yellowstone Park—"Old Faithful" geyser in action (180 ft. high).

242— 6269 From Pt. Lookout, 1,200 ft. above river, up cañon to Lower Falls (308 ft.), Yellowstone Park.

*243— 6271 Ten miles of yawning chasm—down the cañon from Inspiration Point, Yellowstone Park.

COLORADO—12 *stereographs or slides*

244—10617 Gray's and Torrey's Peaks (over 14,000 ft. altitude) S. from Mt. McClellan, Colorado.

*245—10623 Snow-streaked Mummy Range, W. N. W. from Prospect Mt., Estes Park.

*246—10736 Gateway of the Garden of the Gods, west to majestic Pike's Peak, Colorado.

247— 6208 The Tower of Babel, Garden of the Gods, Colorado.

248— 6224 Weird forms of eroded rocks in the Garden of the Gods, Colorado.

*249—10629 Nightingale Mine, Bull Hill, earth's richest gold field, Cripple Creek.

*250— 6218 Royal Gorge, where railway hangs over Arkansas River cañon, Colorado.

251—10631 Marshall Pass (10,856 ft.), Continental Divide, S. E. to Mt. Antero.

*252—10644 Peering down into awesome depths of Box Cañon, Ouray, Col.

*253—10645 Mt. Abram (S.) guarding stage road between Ouray and Red Mountain.

*254—10653 Cliff Palace (S. S. E.), largest of prehistoric homes in Mesa Verde Park.

255—10652 A cañon where ancient cliff dwellers lived (S.), Mesa Verde Park.

UTAH—1 *stereograph or slide*

256— 7653 Salt Lake City northwest from the Court House —the Temple at distant left, Utah.

ARIZONA—*22 stereographs or slides*

*257— 6156 Among the 30,000 cattle at Sierra Bonita ranch —roping a yearling.

258— 6155 Moving a herd, Sierra Bonita, the oldest ranch in Arizona, where 30,000 cattle range.

*259— 6158 Cowboys examining a yearling's brand to settle a dispute, Sierra Bonita Ranch, Arizona.

260— 6148 A long buried Chapter in the Tale of the Ages —Petrified Forest.

*261— 6186 South to picturesque mesa village of Wolpi, Hopi Indian Reservation, Arizona.

*262— 6167 At breakfast, typical desert home of Navajo Indians (S. W.), Arizona.

*263— 6178 Home duties of the Hopi Man, a scene at the Indian village of Oraibi.

*264— 6188 Blanket Weaving—a Hopi Indian at work, Arizona.

*265— 6140 Climbing the last loop on the Mountain Railway to Morenci Copper Mines.

*266— 6144 Inclines to the copper mines, Metcalf, Arizona.

*267— 6145 Loading Surface Ore, Metcalf Copper Mines, Arizona.

268— 6147 In the Mountain's Heart—running out Copper Ore, Wilson Mine, Metcalf, Arizona.

*269— 6072 A wonder to the primitive inhabitants—Sante Fe train crossing Cañon Diablo, Arizona.

*270— 6073 From Red to San Francisco Mountain—a woody wilderness in Arizona.

*271— 6074 Blown asunder by volcanic energies—Red Mountain, an extinct volcano, Northwestern Arizona.

*272— 6075 Labyrinthine ways through the lava and ash formation, Red Mountain Crater, Arizona.

*273— 6162 A wilderness of sand, miles from human habitations, Painted Desert of Arizona.

Grand Cañon—5 stereographs or slides

*274— 6076 "The sinuous Colorado yellow as the Tiber"—Grand Cañon, Arizona.
275— 6079 Descending into Grand View Trail by a short, steep mining path, Grand Cañon of Arizona.
276— 6080 Dendritic stalagmites in a limestone cave, Grand Cañon of Arizona.
277— 6084 Prospecting for gold, Indian Gardens, Grand Cañon of Arizona.
*278— 6088 Overlooking Nature's greatest Amphitheatre—from Rowe's Point N. W., Grand Cañon of Arizona.

PACIFIC COAST STATES

(37 *stereographs or slides*)

CALIFORNIA—*22 stereographs or slides*

*279— 5956 Redlands and its wealth of orange groves from Smiley Heights, Cal.
*280— 5958 Picking oranges in one of the famous groves at Riverside, Cal.
*281— 6002 Flowers and fruit and winter sunshine on an orange tree, in a forty-acre grove, near Pasadena.
*282— 5959 Magnolia Avenue, tropical beauties of Riverside, California.
*283— 8373 A nest of ostrich eggs.
*284— 8189 After the earthquake in San Francisco, Cal.
285— 8201 Union Street, rent by the great earthquake, San Francisco, Cal.
*286— 5954 Paradise of the sea gulls—E. across San Francisco Bay to Oakland.
*287— 5966 Young seals sporting on the beach, Santa Catalina Island, off California.

Yosemite Valley—5 stereographs or slides

*288— 6017 From Inspiration Point (E. N. E.) through Yosemite Valley, showing Bridal Veil Falls, California.
289— 6018 El Capitan (3,300 ft. high) east to Half Dome, Yosemite Valley, Cal.

290— 6030 Nearly a mile straight down and only a step—from Glacier Point (N.), Yosemite, Cal.

*291— 6031 Overlooking Nature's grandest scenery—from Glacier Point (N. E.), Yosemite Valley, Cal.

*292— 6039 From Clouds Rest over Lake Tenaiya to the distant Matterhorn, Sierra Nevada Mts., California.

Big Tree District—9 stereographs or slides

*293— 5976 A majestic triumphal arch—cavalry passing through the great tree—"California"—Cal.

*294— 5985 A monster Sequoia just felled in grove at Converse Basin, Cal.

295— 5984 The stump where a forest giant stood, and the saw which felled it, big tree logging, Converse Basin, Cal.

*296— 5987 Big tree logging—blast rending a section of a great tree—Converse Basin, Cal.

*297— 5989 Big tree logging—Mules hauling enormous sections of the great log on skids to the mills—California.

298— 6011 Flat car train loaded with sugar pine logs—starting for the mills, McCloud River, Cal.

*299— 6009 Saw mill in the big tree districts and the stumps of some of the giant Sequoia, Millwood, Cal.

300— 6013 Poling logs in McCloud River Lumber Co.'s mill pond—looking toward magnificent Mt. Shasta, Cal.

OREGON—*7 stereographs or slides*

*301—10057 Crater Lake, a jewel marking an old volcano, Eagle Crags, N. W. to Glacier Park, Oregon.

302—10019 Amidst everlasting snows—Mt. Hood and Eliot Glacier, from lateral moraine, Oregon.

*303— 9864 Irrigating a strawberry field (outlook N. to Mt. Adams), Hood River Valley, Oregon.

*304— 6233 Stupendous log raft containing millions of feet of timber, Columbia River.

*305— 9859 Logs shooting down a mountain side through a 350-ft. flume to water.

*306— 6236 Seining Chenook salmon, largest variety known, Columbia River.

*307— 6237 Chenook salmon on the floor of a great cannery, Astoria, Columbia River.

WASHINGTON—8 *stereographs or slides*

308— 6229 Brailing—taking salmon from the trap for the great canneries, Puget Sound.

*309— 6227 Modern American Harvesting in the Great Western Wheat Fields, Walla Walla.

310— 9890 In the great fruit district—picking red raspberries, Puyallup, Wash.

*311—11242 Mt. Tacoma from camp, Longmire Springs, looking N. E., Washington.

*312— 9931 Perilous climbing over ice-crags of Stevens Glacier, Mt. Tacoma, Washington.

*313— 9928 Risky business! Peering into the awful depths of a crevasse, Stevens Glacier, Washington.

*314— 9929 The sun-scarred face of Nisqually Glacier, Mt. Tacoma, Wash.

*315— 9873 Seattle (distant) and harbor from Great Northern Docks, Wash.

POSSESSIONS OF UNITED STATES

(48 *stereographs or slides*)

ALASKA

(4 *stereographs or slides*)

*316— 4707 Kasaan Village, Alaska.

317—10656 Far North metropolis of Juneau in a setting of mountains and sea, Alaska.

*318—10657 Among the icebergs in Taku Inlet, Alaska.

*319—10655 Miners on the rim of the "glory hole" at the Treadwell Mine, Alaska.

PORTO RICO

(7 *stereographs or slides*)

*320— 6628 Columbus Square, City and Bay, from San Cristobal Fortress, San Juan.

*321— 6637 America's greatest gift to Porto Rico—the public school, Caguas.

322— 6659 Charming Porto Rico—a pretty suburban home near Mayaguez.

*323— 6660 Amidst the charms of Porto Rico—delicious pineapple in the fields of Mayaguez.

324— 6661 Husking the crop in a Cocoanut forest, near Mayaguez, Porto Rico.

*325— 6663 Aguadilla—Columbus' first landing place on the isle of Porto Rico.

326— 6645 A holiday jaunt in a horseless carriage—Coamo, Porto Rico.

PANAMA

(14 *stereographs or slides*)

327— 6468 Government model (French) of the great Panama Canal.

328— 6455 Soldiers going to the cathedral on Sunday morning—finest structure in Panama City.

329— 6473 Pounding rice—native life in the interior of the Isthmus, Panama.

*330— 9366 Palm-shaded buildings of Ancon Hospital, best equipped in the tropical world, Panama.

*331— 6471 Indian "dug outs" on the Chagres River, bringing bananas, the chief export of Panama, to Gatun.

*332— 6453 From the old Spanish fort S. E. to islands, guarding Pacific entrance to canal, Panama.

333—11482 Through famous Culebra Cut—Gold Hill on the right, Contractors Hill on the left, Panama.

*334—11479 Steam shovel and tripod drills deepening canal —70-foot embankment, Culebra Cut, W.

335—11480 Looking south from Obispo toward Lascadas, over finished Canal, Panama.

*336—11481 Looking north from west embankment, Miraflores, showing inclines from lower to upper locks.

337—11477 East chamber of lower locks, from construction trestle toward Panama City, Miraflores.

*338—11478 South over upper guard gate of west chamber, Upper Locks, Miraflores.

339—11502 East chamber of Gatun lock after filling, showing Gatun lighthouse, Panama.

*340—11501 S. over Gatun Lake, showing approach-wall, and mechanism for towing boats through the locks, Panama Canal.

HAWAIIAN ISLANDS
(7 *stereographs or slides*)

341—10688 Honolulu's Executive Building and cloud-wreathed mountain background.

*342—10686 Every-day business on Fort Street, outlook N. to Pacific Heights, Honolulu.

*343—10694 Ferns and cocoanut palms of a Pacific Paradise, Waikiki, Hawaiian Islands.

*344—10697 In the heart of a banana plantation, Hawaiian Islands.

345— 4678 In the crater of Kilauea Volcano—a gorge in the old lava, Hawaiian Islands.

*346— 4679 Looking into the Lake of Fire, Crater of Volcano Kilauea, Hawaiian Islands.

*347— 4680 Stones and lava thrown upward, eruption of Mokuaweoweo Volcano, Hawaii, July 4, 1899.

SAMOA
(1 *stereograph or slide*)

*348—10390 Some of our Pacific Island cousins and their home, Tutuila, Samoan Islands.

PHILIPPINE ISLANDS
(15 *stereographs or slides*)

*349— 4544 Manila Bay from within the breakwater, across to cathedral, P. I.

350— 4560 Steamships and local river craft on the lower Passig, Manila, P. I.

*351— 4561 Escolta, the principal business street in Manila, Philippine Islands.

*352— 4564 Camp of the American Army at Manila, Philippines.

353— 4545 On the Luneta beach during a typhoon—looking south—Manila, P. I.

354— 4557 Filipino school girls and their native teachers, Manila, P. I.

*355— 4580 Making rope from the famous native hemp, Manila, Philippines.

*356— 4579 A workingman's home and family, Ermita, P. I.

*357— 4628 Typical Filipino farming scene, a Rice Field and Water Buffalo, Luzon, P. I.

*358— 4636 Filipino wagons drawn by carabao, Iloilo, Panay, Philippines.
*359— 4639 Weaving the famous pina cloth at Molo, Panay, Philippines.
360— 4645 A street in Cebu and its holiday crowds, Cebu, P. I.
*361— 4656 Drying hemp on the Island of Cebu—the principal export of the Philippines.
362—10683 Filipino saw-mill of a primitive sort, Cebu, P. I.
*363— 4650 Carting manila hemp to the wharf, Cebu, P. I.

OTHER COUNTRIES IN NORTH AMERICA

(*76 stereographs or slides*)

CANADA

(*25 stereographs or slides*)

EASTERN CANADA—10 *stereographs or slides*

*364— 8042 Yarmouth Harbor at high tide, Nova Scotia.
*365— 4785 Village of Grand Pre, in its "fruitful valley," Nova Scotia.
*366— 4783 Perce Bay, Perce, Quebec.
367— 4782 The famous Perce Rocks, Perce, Quebec.
*368— 4780 Gannet Ledges, the homes of the Gannets—on the St. Lawrence River near Perce Village, Canada.
*369— 8048 The best fortified town in the Western world—Quebec, from Levis across the St. Lawrence, Canada.
370— 8533 Looking up the St. Lawrence from Laval University—citadel ahead beyond hotel, Quebec, Canada.
*371— 4756 Bird's-eye view of Montreal from Mount Royal, Quebec.
372— 4721 Ottawa Park and Government Grounds, Ottawa, Canada.
373— 4749 Amidst the island gems which adorn the St. Lawrence, Thousand Islands.

WESTERN CANADA—15 *stereographs or slides*

374—11097 Carrying canoe (portage) past rapids on the Muskoka river, Canada.

*375— 4806 Bird's-eye view of Winnipeg—looking West—Manitoba, Canada.

*376—11099 Great modern thresher at work, Manitoba, Canada.

*377—11100 Sacking wheat by the side of great modern thresher, Manitoba, Canada.

*378—11101 Grain elevator, Fort William, Lake Superior, one outlet for Manitoba wheat.

379— 4818 The "Three Sisters" from the Bow River Valley, Canmore, Alberta, Canada.

*380— 4822 Beautiful Valley of the Bow, Banff, Alberta, Canada.

*381— 4827 The placid waters of Lake Louise and Mt. Victoria, Rocky Mts., Alberta, Canada.

382— 4831 At the base of Mt. Stephen, Field, British Columbia, Canada.

*383— 4845 Roger's Pass from Hermit Mountain, British Columbia, Canada.

*384— 4842 The great Illicillewaet Glacier of the Selkirks, Glacier, British Columbia.

385— 4712 Mouth of the "Thron Duick" (plenty fish) river, Yukon, Canada.

*386— 4852 Gold miners at work in the Klondike country, Yukon district, Canada.

*387— 4853 The Mine where a single pan of gravel yielded $400 gold, Eldorado Creek, Klondike.

388—11102 Where train and steamship meet—Canadian Pacific Station, Vancouver.

ARCTIC REGIONS—9 *stereographs or slides*

*389— 4686 Arctic Explorers, preparing for the long winter, Cape Sabine and Baffin Bay (79 deg. N. Lat.).

390— 4688 Interior of Fort Magnesia, Cape Sabine, Ellesmere Land.

*391— 4690 Cape Sabine and Baffin Bay, the Peary ship "Diana" putting into winter quarters.

392— 4692 During the Arctic's long Summer day—Esquimaux homes, Peteravik, Ellesmere Land (79 deg. N. Lat.).

*393— 4693 Esquimaux Belles and their garb in the frigid Arctic, Cape York, Greenland.

*394— 4696 West coast of Greenland (Lat. 76 deg. north), little Auks covering the sea.

*395— 4697 The world's most unique inhabitants, Esquimaux with summer tents, Greenland.

*396— 4698 Whalers "Diana" and "Nova Zembla" cruising in the Arctic—Dexterity Harbor and Baffin Land.

397— 4701 Whaling in Baffin Bay—taking out the whale's bone (worth $8,000).

MEXICO

(19 *stereographs or slides*)

*398— 6305 The Cathedral, greatest of Mexican churches, City of Mexico.

399— 6320 Floods of "Sombreros"—a hat store, City of Mexico, Mexico.

*400— 6324 Chapultepec Castle, residence of the President, site of Montezuma's Palace, Mexico City.

401— 9424 Gathering the luscious fruit of a heavily laden mango tree, Cuernavaca, Mexico.

402— 6343 Over Amecameca, N. E. to Ixtaccihuatl (woman in white) from Sacre Monte, Mexico.

*403— 6339 A Mexican country scene—looking west from Puebla to Popocatapetl.

*404— 6360 Extracting pulque from the maguey plant, Mexico's favorite drink, San Juan, Teotihaucan, Mexico.

405— 6362 Pulque gatherers and fuel vender, in a Cactus lane, San Juan, Teotihaucan, Mexico.

406— 6368 Making jute coffee bags in Santa Gertrude factory, near Orizaba.

*407— 6375 Drying coffee, on a coffee plantation near Cordoba, Mexico.

*408— 6380 Crude native method of husking coffee at Amatlan, near Cordoba.

409— 6390 The public washing fonts, Jalapa, Mexico.

410— 6357 Hall of Mosaics, marvelous relic of prehistoric builders, Ruins of Mitla, Mexico.

*411— 6426 In a rubber tree grove on the Ubero plantation —native extracting rubber, Tehuantepec, Mexico.

*412— 6427 Homes and home occupations of the natives of Tehuantepec Isthmus, Mexico.

413— 6391 A water vender, typical of Mexico's mountain cities, Guanajuato, Mex.

*414— 6441 Farming with poorly paid native help, Mexico.

415— 6418 Natives making rope from the maguey plant, Monterey, Mexico.

*416— 6419 Natives weaving matting from the fibre of the maguey plant, Monterey.

COSTA RICA

(*4 stereographs or slides*)

*417— 6445 Looking (W.) over largest banana field in the world—United Fruit Company's Plantation, Zent, C. R.

418— 6447 Opening the pods and drying the cocoa beans on a plantation near Port Limon, Costa Rica.

*419— 6448 Gathering cacao pods—one of Costa Rica's most valuable products—near Port Limon.

*420— 6449 Bread-fruit trees in a grove near Port Limon, Costa Rica.

CUBA

(*12 stereographs or slides*)

*421—11134 Beautiful Plaza and Palace, Havana, Cuba.

*422— 6529 The wrecked "Maine," Havana, Cuba—decorated May 30, 1902, by order of President Palma.

*423— 6549 Morro Castle, Santiago—from across harbor entrance. Through here passed Hobson and Cervera.

424—11135 Where Spain's fleet was destroyed, July 3, 1898, coast (W.) from Santiago, Cuba.

425— 5161 The gallant Cervera's magnificent flagship "Colon," where the great chase ended, Cuba.

*426— 6519 The Cuban Republic's birth—noon, May 20, 1902—General Wood, President Palma, General Gomez and guests, Governor-General's palace, Havana, Cuba.

*427— 6554 The Hills—south from Santiago—showing encampment of American Army, Cuba.

*428— 6545 The courtyard of a typical Cuban home, Remedios, Cuba.

429— 6586 A Sugar Plantation, Caracas, Cuba.
*430— 6587 Hauling car loads of sugar cane into the mill, Sugar Plantation, Caracas.
*431— 6590 Cutting tobacco—a typical plantation—Province of Havana, Cuba.
*432— 6509 Cuban cigarmakers at work in the largest factory in Havana, Cuba.

JAMAICA

(3 *stereographs or slides*)

433— 6619 Citron tree, Jamaica, W. I.
*434— 8138 Gathering bananas at the famous Cedar Grove plantation—under the sunny skies of Jamaica.
*435— 8139 Crude method of grinding sugar cane (product, 25 gallons daily)—mill near Kingston, Jamaica.

MARTINIQUE

(4 *stereographs or slides*)

*436— 6683 A terrible volcanic explosion—Mont Pelee in eruption, June, 1902.
*437— 6685 St. Pierre, its roadstead and Mont Pelee, before terrible eruption, May 8, 1902, Martinique.
*438— 6687 From Orange Hill (N. E.) over dead St. Pierre to Mont Pelee—once beautiful and verdure clad.
439— 6689 Scientists and Naval Officers exploring the ash-covered ruins of St. Pierre, Martinique.

SOUTH AMERICA

(55 *stereographs or slides*)

VENEZUELA

(7 *stereographs or slides*)

*440—11190 Overlooking Caracas, the capital of Venezuela, South America.
441—11139 Statue of Bolivar, the Washington of South America, Caracas, Venezuela.
*442—11191 The bread mule on a typical street in Caracas, Venezuela.

*443—11192 Typical view of the people of Caracas in the Market Place, Venezuela.

*444—11193 Typical scene on Lake Maracaibo, Venezuela, South America.

445—11194 Loading steamer for United States ports, Maracaibo, Venezuela.

446—11195 Timber yard—poles, palms, vine fibre—no metal used, Maracaibo.

COLOMBIA

(*4 stereographs or slides*)

*447—11493 Looking southeast over Santa Marta in the centre of the banana industry of Colombia.

448—11495 A street in Santa Marta, where game cocks are tied in front of each house, Colombia.

449—11494 A fine residence and typical street scene in Barranquilla, Colombia.

*450—11496 Water carriers and thatched roof homes in Barranquilla, Colombia.

BRAZIL

(*5 stereographs or slides*)

*451—11140 Rio de Janeiro—S. E. over Botafoga suburb, Sugarloaf and bay entrance.

*452—11196 Central Avenue, "the $11,000,000 boulevard," north to bay, Rio de Janeiro.

453—11197 Rio de Janeiro's 5-mile quay, encircling world's largest land-locked bay.

*454—11198 Magnificent municipal theatre, San Paulo, Brazil.

455—11199 Packing crude rubber, Para, Brazil, centre of Amazon river-system trade.

ECUADOR

(10 *stereographs or slides*)

*456— 9183 Future citizens of equatorial America—a schoolroom full of boys at Guayaquil, Ecuador.

*457— 9192 Material for 224,000 pounds of chocolate bonbons—cacao beans curing at La Clementina, Ecuador.

*458—11141 Native home, made of bamboo boards—no race-suicide here, Ecuador.

*459— 9196 Up-country hospitality among the natives—dinner in preparation, Riobamba, Ecuador.

*460— 9197 Ice-crested Chimborazo towering 20,498 feet toward the sun, north from road to Quito, Ecuador.

*461— 9198 Traveling up among the Andes—natives on trail between Ambato and Riobamba, Ecuador.

462— 9209 One of the massive aisles in La Compania church—wall decorations of gold, Quito, Ecuador.

*463— 9214 The centre of the equatorial Andes, Quito, looking W., Ecuador.

*464— 9216 Ice dealers of Quito collecting snow near summit of Pichincha, Ecuador.

465— 9217 Where Pichincha's peak rises 15,706 feet on the equator—smoking crater at right.

PERU

(19 *stereographs or slides*)

*466— 9219 Lima from hill at N. E.—Rimac River, twin-towered cathedral, bull ring, shops and homes, Peru.

467— 9227 Weaving home-grown cotton for the S. American trade in a fine, modern mill at Lima, Peru.

*468— 9234 Picking cotton with Chinese labor on irrigated land at the foot of the Andes, Vitarte, Peru.

*469— 9235 Irrigating plains, otherwise sterile, and planting sugar-cane on a farm at Santa Clara, Peru.

*470— 9236 Harvesting sugar-cane on a great plantation between Lima and the Andes, Santa Clara, Peru.

471— 9238 In the heart of the awesome Andes—peering from Oroya R. R. into Rimac River gorge, Peru.

*472— 9239 Chaupichaca bridge, where Oroya R. R., 9,472 feet above sea, assaults Nature's barrier, Peru.

*473— 9248 Pack train of Llamas, unique Andean beasts of burden, with Indian driver, Cerro de Pasco, Peru.

474— 9250 Work to-day at a silver mine that enriched the Spanish centuries ago, Cerro de Pasco, Peru.

*475— 9251 Squaws in the mining country carrying water from Lake Paparoocha, Cerro de Pasco, Peru.

*476— 9254 Where the Pacific waves dash high on the rock-ribbed S. American coast at Mollendo, Peru.

477— 9261 Pack train of donkeys and llamas on way to Arequipa—Chachina Mountains in distance, Peru.

*478— 9256 Prosperous and beautiful Arequipa, 8,000 feet above sea, E. to Pichapicha Mts. (21,000 ft.).

479— 9262 Threatening majesty of El Misti (20,013 feet), a volcano of terrible fame, seen from Arequipa, Peru.

480— 9263 Coming down a rough trail over El Misti, volcano's peak showing beyond steam of crater, Peru.

481—11142 On Lake Titicaca, Peru.

*482— 9264 Straw boats on Lake Titicaca two vertical miles above sea level, on the Andean plateau, Peru.

*483— 9265 Sheep-raising in a sunny valley among the Andes near Cuzco, farm buildings at right, Peru.

484— 9268 Cuzco, once the richest city in America, S. E. from fort of the Inca Kings, seized by Pizarro, Peru.

CHILI

(2 stereographs or slides)

485—11200 Rounding Cape Horn (N. E.), French sailing vessel in distance.

*486—11201 In the Strait of Magellan, looking S. E. to snow-covered Mt. Sarmiento.

ARGENTINE

(5 stereographs or slides)

*487—11202 Most costly docks in the Western Hemisphere, Buenos Ayres, S. A.

*488—11203 Government Building and Plaza, Buenos Ayres, South America's largest city.

*489—11204 Avenida de Mayo, Buenos Ayres, Argentine, the second Latin city in the world.

*490—11205 Cog railroad, climbing through a great cut in the Andes, Argentine.

491—11206 Passengers boarding train that climbs the Andes, Cochenta, Argentine.

URUGUAY

(3 *stereographs or slides*)

*492—11118 Montevideo, the capital of Uruguay, from the harbor, showing shipping.

*493—11186 Beautiful buildings on the principal street of Montevideo.

*494—11187 Public Square and Cathedral, Montevideo.

EUROPE

(290 *stereographs or slides*)

BRITISH ISLES

(77 *stereographs or slides*)

ENGLAND AND WALES

(42 *stereographs or slides*)

LONDON—14 *stereographs or slides*

*495— 9791 Ocean-liners at Albert docks on the Thames, below the world's greatest city, London.

*496—10767 London Bridge from Surrey Side.

497—10768 The new Tower Bridge with Tower of London beyond.

*498— 121 Tower of London, famous old palace and prison of royalty.

499—11311 London's financial centre—Royal Exchange and Bank of England (left).

500— 113 Cheapside, west, past Bow Church, London.

*501—11314 Fleet Street, rich in literary associations, east past St. Bride's to St. Paul's, London.

*502— 104 Houses of Parliament and towers of the Abbey, W. across the Thames.

503— 105 House of Peers, showing seats of the King and Lord Chancellor, London.

*504—11412 Westminster Abbey, south to Victoria Tower of Parliament Buildings, London.
*505— 261 Their Majesties, Edward VII. and Queen Alexandra, Coronation Procession, London.
*506— 265 Governors of an Empire of Nations—Hon. Jos. Chamberlain and Colonial Officials, London.
*507— 327 Trim First Pioneers awaiting inspection, Hampton Court Palace, London.
508—11323 Regent Street, one of the favorite shopping districts, N. W. toward Oxford Street, London.

SOUTHERN ENGLAND—18 *stereographs or slides*

*509— 144 Windsor Castle, from across the Thames, England.
510— 150 The course filling in after the boat races, Henley, England.
511— 158 At Oxford, north to picturesque tower of Magdalen College, England.
*512—10600 Cathedral choir E. past altar of the Corona, Canterbury, England.
*513—11188 Shakespeare Cliff, famous chalk cliffs (S. W.), Dover, Kent, England.
*514—10599 Holiday throngs on the sands at Southsea, England.
515— 234 The quaint cottage homes of Shanklin, Isle of Wight, England.
516— 196 After a hard run with the otter pack—a bit of favorite sport in Wiltshire, England.
*517— 182 Ancient Elizabethan house used by Raleigh and Drake, Exeter, England.
*518— 211 The boundless ocean from the wild and dreary cliffs at Land's End, England.
*519—11189 Taking clay from great pit for fine English porcelain, Bugle, England.
*520—10998 Grinding and mixing clay for making fine porcelain ware, Worcester.
*521—10999 Dipping plates in glaze preparatory to firing, Porcelain Works, Worcester, England.
*522—11000 "Throwing" plates on a potter's wheel—Royal Porcelain Works, Worcester.
523—11001 Turning and trimming a cup on the lathe—Royal Porcelain Works, Worcester.

*524—10012 The river Teme at Ludlow—The ancient seat of the Lords' President of Wales, England.
*525— 165 The living room in Shakespeare's house, Stratford-on-Avon, England.
*526— 170 Anne Hathaway's cottage at Shottery, England.

NORTHERN ENGLAND—8 *stereographs or slides*

*527—11497 Among England's thrifty farmers, unloading and stacking hay near Boston, Lincolns.
528—11500 Turning up the soil of "Old England" with a modern motor plow.
*529—10607 Solemn length of the Cathedral nave, Durham, England.
530— 203 "Dove Cottage," for years the home of Wordsworth, in poetic Grasmere.
531—10608 Romantic beauty of ruined Furness Abbey (12th century), England.
532—10013 Narrow streets and quaint old houses of Shrewsbury, England.
533—10155 Song thrush sitting—male bird by the nest—England.
534—10123 Goldfinch, its nest and eggs, England.

WALES—*2 stereographs or slides*

535— 388 The Bridge and Castle, strong and noble, of mediæval fortress at Conway, Wales.
536— 385 Fairy Glen, Bettws-y-Coed, North Wales.

SCOTLAND

(17 *stereographs or slides*)

*537— 7461 National Gallery, Scott Monument, Princes St. and Calton Hill, N. E. from Edinburgh Castle, Scotland.
*538— 7466 Princes Street, Edinburgh, Scotland.
539— 7472 Holyrood Palace, old home of ill-fated Mary, Queen of Scots, Edinburgh.
*540— 7486 Melrose Abbey, the shrine of heroic tradition and romantic story.
541— 7489 Tantallon Castle, where Earl Douglas and Lord Marmion faced each other, North Berwick, Scotland.

*542— 7492 Scotland's pride—the great Forth Bridge and the Highland Kilt.

*543— 7500 Bargains in sheep at the Georgemas Fair, near Thurso, Scotland.

544— 7501 Highland cattle in pasture at Thurso, Scotland.

545— 7503 Scotch herring, the best in the world—thousands of kegs ready to ship, Wick, Scotland.

*546— 7521 The birthplace of Robert Burns, Ayr, Scotland.

*547— 7530 Stirling Castle, the seat of old-time kings, Scotland.

*548— 7533 Where the Forth "in turnings intricate through these rich fields doth run," Stirling, Scotland.

*549— 7535 Looking from Stirling Castle on the cliffs, northward toward the rugged Highlands, Scotland.

550— 7536 From Stirling Castle west up the beautiful Forth Valley toward the Trossachs, Scotland.

551— 7537 Ben Venue, veiled in Highland mists—seen from across Loch Achray in the Trossachs, Scotland.

552— 7538 The "Brig O'Turk" over the glassy stream at Glenfinlas in the Trossachs.

*553— 7542 Ellen's Isle, the peaceful retreat of Scott's "Lady of the Lake," Loch Katrine, Scotland.

IRELAND

(18 *stereographs or slides*)

*554— 395 Queenstown, its quay and big Cathedral N. W. from the harbor, Ireland.

*555— 420 Over beautiful Enniskerry, S. to Sugar Loaf Mt. near Dublin, Ireland.

*556— 410 Trinity College (right) and Bank of Ireland—old Parliament House (left) N. Dublin, Ireland.

*557— 446 Bleaching field near Linen mills (S. E.), Lisburn, New Belfast, Ireland.

*558— 438 Hatcheling flax—first process in making the famous Irish linens, Belfast, Ireland.

*559— 439 Plain weaving room (1,000 looms), in a great linen mill at Belfast.

*560— 9109 Building an ocean liner, Harland & Wolff's Works, Belfast, Ireland.

*561— 436 Royal Avenue, N. W. from Donegal Place, most important street of Belfast.

*562— 441 Looking S. W. over the famous Giant's Causeway, Northern Ireland.

563— 516 The "Honeycombs," Giant's Causeway (N.), remarkable basaltic formations.

564— 442 The "Organ," Giant's Causeway, (E.) a cliff of columns, 120 feet high, north coast of Ireland.

565— 471 The splendid cliffs of Menawn, S. E. across Keem Bay, over Keel village, Achill Island, Ireland.

*566— 472 Harvesting on the island of Achill, N. W. to Sleivemore, northwestern Ireland.

*567— 428 Cutting peat, the vegetable substitute for coal, near Kiltoom, Roscommon (N. W.), Ireland.

568— 429 Fireplace for burning peat, where all family cooking is done—a home in Ireland.

*569— 493 The picturesque home of a prosperous farmer—County Kerry, Ireland.

*570— 9118 Magnificent cliffs at Loop Head, a bulwark against the Atlantic (N. E.), County Clare, Ireland.

*571— 487 Diadem of the Emerald Isle, Lower Lake, S. W. from Lord Kenmare's mansion, Killarney, Ireland.

NORWAY

(24 stereographs or slides)

*572— 609 Leaving old home and friends—waving goodbyes to emigrants starting for America, Christiania, Norway.

*573— 601 Karl Johan Street, W. N. W. to the Royal Palace, Christiania, Norway.

574— 608 Old Viking ship, explorer of northern seas and burial boat of Norse chief, Christiania, Norway.

575— 619 Snowy heights of Mt. Gausta (6,180 feet), towering over quiet homes in the Maan Valley, Norway.

*576— 620 Imposing beauty of spray-enshrouded Rjukanfos, the "foaming fall" in the 800-ft. leap, Norway.
*577— 624 Steamboat climbing a hill beside the Vrang waterfall, by locks in Bandak Nordsjo Canal, Norway.
*578— 632 A farmer's family making hay in a sunny field between the mountains, Roldal, Norway.
*579— 636 Village roofs and sunny fields of Odde, N. up the narrow mountain-walled Sorfjord, Norway.
580— 736 Odde, and southern end of mountain-walled Sorfjord—north from above the rapid Aabo river, Norway.
581— 639 A humble mountain home at the foot of the cliffs where the Skiaeggedals Falls leap 525 feet.
*582— 743 Herd of reindeer, hardy creatures of the northern wilds, and Hardanger glacier, Norway.
583— 646 Stream of solid ice (Hardanger glacier) and lake where it melts.
*584— 648 Bergen, west from the Floifjeld, over the harbor (right), and Puddefjord (distant), Norway.
*585— 660 Gudvangen's outlook over the Naerofjord, where the sea reaches far in among the mountains, Norway.
*586— 667 Grytereids glacier glittering above drifting clouds, seen across placid Lake Olden, Norway.
*587— 666 On sombre Lake Olden, lying deep between cloud-covered mountains to Maelkevold Glacier, Norway.
588— 671 Rustoen Falls, as they seem to come out of the sky, above Rustoefjeld's rugged heights, Norway.
*589— 672 Perilous crevasses of the Brigsdal Glacier, one of the grandest in all Norway.
*590— 762 Ragged ice-masses of Kjendal glacier at lower end, Norway.
*591— 674 Among mountains and chasms of ice—enormous crevasses of Brigsdal glacier, Norway.

*592— 681 From the mountain inn at Vidde saeter down the Vidde valley, Mt. Skaala, Norway.

*593— 696 People of the frigid north—Lapp home and family, near Tromsoe, Norway.

*594— 665 A Nordfjord bride and groom with guests and parents at their house door, Brigsdal, Norway.

*595— 7943 The Midnight Sun in July over cliffs of Spitzbergen and Arctic Ocean, 78° 15′ N. latitude.

SWEDEN

(8 *stereographs or slides*)

*596— 800 Palaces, homes, churches and busy streets of beautiful Stockholm, N. W. from the Mosebacken, Sweden.

597— 829 Every-day life and traffic on one of Stockholm's busy streets, Vasagatan, Sweden.

*598— 823 "O, stately stand thy palace walls,
Thy great ships ride the Baltic seas."

599— 812 In the gorgeous reception rooms of King Oscar's palace at Stockholm.

*600— 861 Dalecarlian maidens strolling through the fields on a hillside overlooking Rattvik, Sweden.

*601— 867 A farmer's family harvesting oats in a sunny field at Lerdal, Sweden.

*602— 885 Happy crowds celebrating the Vorfest (Spring Festival) in the city park, Jonkoping, Sweden.

603— 892 The Toppo Falls, Trollhattan—watching the mad race of the struggling waters, Sweden.

DENMARK

(3 *stereographs or slides*)

*604— 1005 Busy harbor of Copenhagen, a famous port of old times, Denmark.

*605— 1024 Queen Louise Bridge and its gardens, with handsome streets at its eastern end, Copenhagen.

606— 1040 Packing prize butter for the European markets in the biggest dairy in the world, Denmark.

RUSSIA

(14 *stereographs or slides*)

*607— 1054 Nevsky Prospect, the principal street of St. Petersburg, Russia.

*608— 1064 St. Isaac's Cathedral, St. Petersburg—the largest church in Russia.

*609— 1074 Making hay in Russia.

610— 1075 The Avenue of Fountains, Imperial Palace of Peterhof, Russia.

611— 1079 Their Majesties, the Empresses of Russia and Germany, driving through Peterhof Park, Russia.

612— 1082 Russian Imperial yacht Alexandria passing German cadet ship Charlotta, St. Petersburg.

*613— 1099 The Moskwa River and the shimmering spires of "Holy Moscow."

614— 1105 Tower of Ivan and Cathedral of Archangel Michael, Kremlin, Moscow.

615— 1112 Central entrance to the Great Bazaar, Kitai Gorod, Moscow.

616— 1125 Russian Cloth Market in "the Fair" of Nijni-Novgorod, Russia.

617— 1127 Siberian hides, and Village of the Tartars, Nijni-Novgorod.

*618— 1128 A characteristic country house in the heart of Russia.

619— 1130 Alexandrofski slope and winding Dnieper River, Kief, Russia.

*620— 1145 A reservoir after evaporation—turning up the salt—salt fields, Solinen, Russia.

GERMANY

(18 *stereographs or slides*)

*621— 1330 Home of Kaiser Wilhelm, head of the vast German Empire—Palace, Berlin, W. from City Hall.

622— 1300 One of the world's famous streets—W. along Unter den Linden, Berlin.

623— 1310 Convenience and architectural beauty—elevated R. R. along Bülow Strasse, Berlin, Germany.

*624— 1324 Ship canal connecting the Baltic and North Seas—E. toward terminus at Kiel, Germany.

*625— 1273 The Zwinger, Dresden, with stately galleries and charming courtyard.

*626—11171 Sturdy women hoeing sugar beets in the rich fields of Germany.

627—10436 Dressing dolls for European and American trade, factory at Sonneburg.

*628—10442 Stitching shoes in a busy factory—a growing industry—Nuremberg.

*629—11173 Trimming and polishing heels in a large shoe factory, Nuremberg.

630—10438 Growing hops and harvesting barley on a Bavarian farm, near Bamberg.

*631— 1260 The great Watzmann—on the Konigs See, Bavaria, Germany.

*632— 1254 Neuschwanstein from the heights, Bavarian Alps, Germany, magnificent creation of Ludwig II.

*633—10448 Upper valley of the Danube cut through the Bavarian Mountains, E. N. E.

*634— 1245 Heidelberg and Neckar River, Germany.

*635— 1240 Ehrenfels Castle (XIII Cent.), S. W. across the Rhine to Bingen.

636— 1237 Lorelei Rocks where the siren lured boatmen to destruction—The Rhine, Germany.

637—10460 Fortress of Ehrenbreitstein seen N. N. E. across the Rhine from Coblenz.

*638—10463 Cologne's Cathedral, Town Hall and bridge of boats, N. W. across Rhine.

HOLLAND

(8 *stereographs or slides*)

*639— 1502 Amsterdam, S. E. from Zuider Kerk, over shady streets and glassy Canals, Holland.

*640— 1506 Looking N. up a tree-lined canal to the old Weigh House, Zuider Kerk at right, Amsterdam, Holland.

641— 1514 Church at Delfthaven where the Pilgrim fathers prayed before embarking for America, Holland.

*642— 1515 Industrious peasants and milk-cart passing a windmill on a dyke road west of Dordrecht, Holland.

643— 1516 Substantial dignity of a Dutch matron with her dog team—outskirts of Enkhuysen, Holland.

*644— 1521 Quaint costumes of village girls on the wharf beside the fishing boat Marken, Zuider Zee, Holland.

*645— 1528 Picturesque and thrifty countrywomen with milk pails balanced on wood yokes, Goes (Zeeland), Holland.

*646— 1531 Miles on miles of peaceful pastures where windmills beckon to each other, Holland.

BELGIUM

(*5 stereographs or slides*)

*647— 1471 Magnificent palace of Justice, S. E. from Notre Dame de la Chapelle, Brussels, Belgium.

648— 1473 Town Hall, beautiful with sculptures, gables and clustered spires, Brussels, Belgium.

*649— 1482 North along the River Scheld, where shipping once made Antwerp Europe's richest commercial port, Belgium.

*650— 1491 Flax in great stacks curing in sunny fields near Courtrai, centre of Belgium's linen industry.

*651— 1492 Flax taken from stacks and soaked in river Lys, preparing for spinning, Courtrai, Belgium's linen market.

FRANCE

(*21 stereographs or slides*)

652— 9563 "Field of the Cloth of Gold," where kings met (1520), Balinghem.

*653— 1555 The Arch of Triumph, built to commemorate victories of Napoleon I, Paris.

*654— 1562 Eiffel Tower and the Trocadero Palace, south from the Arch of Triumph.

*655— 9736 The favorite drive, Champs Elysées, from Arch of Triumph to Place de la Concorde, Paris.

*656— 9572 The old City Island and the Seine, S. E. from the Louvre, Paris.

*657— 1563 Palace of Justice and Sainte Chapelle, west across the Seine, Paris.

658— 9574 Making Gobelins tapestry (weavers behind loom see results in mirrors), Paris.

*659— 9576 The old historical Cathedral, most celebrated in France—Notre Dame on City Island, Paris.

660— 1595 Gallery of Battles, memorial museum in Palace of Versailles, France.

*661— 9583 Vineyards covering sunny fields at Ay near Epernay (champagne district), France.

662— 9584 West front of the superb old Cathedral, a marvel of Gothic art, Rheims.

*663— 9586 Cathedral interior, from choir where kings were crowned, to W. end, Rheims, France.

664— 9588 Battlefield of Sedan (N. E.), where 11,000 French fell before surrender, France.

*665— 1600 Nice, southern France, a favorite winter resort on the Riviera.

666— 1601 The Port of Nice, France, from the Chateau.

*667— 9595 Glacier-covered heights of the Pyrenees, S. from road to Gavarnie.

*668— 9601 Vast salt fields with children collecting salt for stacks, Le Croisic.

*669— 9604 At grandmother's house—interior of a Breton village home, Crach.

670— 9606 Where Atlantic surges beat on the rock-bound coast of Finistère.

671— 9607 Autumn in Brittany—peasants threshing grain on a farm near Carhaix.

*672— 9623 A boat-builder and boy customers—E. along sea-beach at Dieppe, France.

MONACO

(1 *stereograph or slide*)

673— 1718 Monaco, the Capital of Monaco—the smallest principality on earth.

SPAIN

(19 *stereographs or slides*)

674— 2272 Harvesting wheat in the Basque Province of Guipuzcoa, Northern Spain.

675— 2265 The old Aqueduct (of Trajan's time), the most important Roman structure in Spain, Segovia.

*676— 2180 Guard Mount in the Plaza de Armas, Royal Palace, Madrid, Spain.

677— 2183 Cibeles fountain, Bank of Spain and Calle de Alcala, one of Madrid's best streets, Spain.

678— 2276 The Viscaya Bridge across Nervion River and its Flying Ferry at Portugalete, Bilbao, Spain.

*679—10412 How the cow goes around delivering milk to housekeepers in Valencia.

*680—10411 A water-seller on his daily round, filling a jar of primitive design, Valencia, Spain.

*681— 9779 Cork oaks partially stripped of bark, in a grove at Almoraima, Southern Spain.

682— 9777 Boiling bark from cork-oaks, preparatory to scraping and pressing, Almoraima, Spain.

*683— 9778 The cork-industry—scraping the oak bark and pressing it flat, Almoraima, Spain.

*684— 2203 The Alhambra and snowy Sierras, S. S. E. from San Christobal Church, Granada, Spain.

*685— 2209 Court of the Lions—magnificent testimony to departed grandeur, Alhambra, Granada, Spain.

*686—11175 Picking great bunches of dates from luxuriant date palms, Elche, Spain.

*687— 9782 Shipping on the Guadalquiver, S. E. from Bridge of Isabel II to Golden Tower, Seville, Spain.

688—10510 The Espada giving a bull his death-blow—end of a bull-fight at Seville.

689— 2238 Cadiz and its Cathedral, S. E. from Watch Tower to the open Atlantic.

690—10394 Work at the snowy salt stacks of San Fernando, on marshy levels near Cadiz, Spain.

*691— 2247 Under a canopy of grapes—picking, sorting and packing the famous "Malagas," Malaga, Spain.

*692—10422 Gibraltar, once the landmark of civilization's end, seen from the north.

PORTUGAL

(4 *stereographs or slides*)

693— 2305 The Castle of St. George and City from the Tagus, Lisbon, Portugal.

694— 2322 The court and beautiful cloisters, the glory of Sao Jeronymo Convent, Belem, near Lisbon, Portugal.

695— 2317 The water course inside the Aqueduct (1729-1749) which brings water from fifteen miles away, Lisbon, Portugal.

MADEIRA ISLANDS (*Portugal*)

(1 *stereograph or slide*)

696—11177 Sleighing in summer time, unique ox-sledges, Funchal, M. I.

SWITZERLAND

(28 *stereographs or slides*)

697— 1736 The Falls of the Rhine and Laufen Castle, Switzerland.

*698— 1744 Lucerne and the lofty Pilatus, Switzerland.

*699— 1745 An Alpine elevator to the clouds, Mt. Pilatus, Switzerland.

*700— 1747 The backbone of Europe, from the summit of Pilatus (7,000 feet).

*701— 1749 Sisikon and the mighty Ur-Rothstock (9,020 feet).

702— 1751 Tunnels of the Axenstrasse, overhanging Lake Lucerne.

703— 1752 The river Aare at Berne and distant Alps.

*704— 1754 Principal street and old clock, Berne, Switzerland.

*705— 1764 Jungfrau (13,670 feet) from the summit of Scheldegg.

706— 1768 A country road, Switzerland—"Old summer pictures of the quiet hills."

*707— 1770 "Youthful years and maiden beauty"—the same in all the world, Switzerland included.

708— 1771 The wonderful gorge of the River Aare, Switzerland.

709— 1779 The descent to Italy—road winding down from the Maloja Pass, Engadine.

*710— 1785 Huge ice river—Fiescher Glacier and Oberaarhorn N. E. from the Eggishorn, Switzerland.

711— 1786 The great Aletsch Glacier and Marjelen Lake, west from the Eggishorn, Switzerland.

712— 1787 Edge of Aletsch Glacier, showing the treacherous crevasses and Marjelen Lake (looking west).

*713— 1790 The Alpine Spirit's sanctuary—the charming Zermatt and the Matterhorn, Switzerland.

714— 1796 Breithorn, Monte Rosa group, from the Gornergrat, Switzerland.

715— 1805 World-famed monastery and dogs—Great St. Bernard Pass.

*716— 1809 Lake Geneva and the Dent du Midi, from village of Glion.

717— 1814 Frightful Alpine precipices—looking from Aiguille Rouge (Brevent) to Mt. Blanc, Alps.

718— 1815 Mont Blanc, monarch of European mountains, from the Brevent, Alps.

*719— 1828 Descent of Mt. Blanc—enormous crevasses near the summit—Alps.

720— 1831 Ascent of Aig du Tacul—S. W. to Aig du Geant (left) and Tour Ronda (right), Alps.

*721— 1834 Mer de Glace with Aig du Geant, Charmoz and Montanvert in distance, Alps.

722— 1835 Great Ice Falls at the end of the Mer de Glace, Alps.

723—11115 Boulders and dangerous crevasses on the Mer de Glace, Switzerland.

*724— 1861 The picturesque Chamonix Valley—mountain hamlets at the foot of Le Brevent, Alps.

ITALY

(*25 stereographs or slides*)

725— 1965 The Tiber and its island from the southeast, Rome.

*726— 1968 Rome, the Eternal City, from St. Peter's Dome.

727— 1980 The Library of the Vatican, Rome, Italy.
*728— 1991 The Roman Forum, southeast from the Capitol, Rome, Italy.
*729— 1994 A mighty monument to pagan brutality—the Coliseum (E.) at Rome.
*730— 2011 Bird's-eye view (east) of Naples and Vesuvius, Italy.
*731— 2018 In the wilderness of lava, at base of Vesuvius (E.), Italy.
732— 2024 Beautiful home of the Vetii, buried A. D. 79, Pompeii, Italy.
733— 2031 Amalfi and the sea, east from the Capuchin Convent, Italy.
*734— 2037 The world-famed marble quarries at Carrara, Italy.
735—11116 Huge blocks of world's finest marble in quarries, Carrara, Italy.
*736— 2041 Florence and the Arno northwest from San Miniato, Italy.
737— 2044 The Duomo, "the very great heart" of Florence (A. D. 1296-1462).
*738— 2052 Milan's Cathedral, one of the finest temples on earth, Italy.
739— 2053 The Cathedral of Milan—up among its myriad spires, Italy.
*740— 2056 Venice—"white swan of cities," N. from S. Giorgio Island.
741— 2060 Bridge of Sighs, between a palace and a prison (North), Venice.
*742— 2064 Palazzo Ca d'Oro, home of an old merchant of Venice (N. E.).

SICILY (*Italy*)

(*7 stereographs or slides*)

*743— 8558 Goats milked while you wait—in a crowded market place in old Palermo, Sicily.
*744— 8565 Picking lemons in a grove on the Conca d'Oro (Golden Shell), outside Palermo.
745— 8585 Greek Theatre, of 5th century B. C., with modern Syracuse, and harbor, Sicily.

746— 8601 Mount Etna smoking above its cloak of snow, N. from St. Nicolai Church tower, Catania, Sicily.

*747— 8607 From Charybdis to Scylla, E. N. E. from Faro Point, Sicily, across Messina Strait to Mainland.

748— 8606 Messina, west between harbor and mountain—Italy's busiest commercial port—Sicily.

*749—10495 The once beautiful water-front after the earthquake, digging for bodies, Messina, Sicily.

AUSTRIA

(11 *stereographs or slides*)

750— 1872 Salsburg and the winding Salzach from the castle.

*751— 1883 The Franzens-Ring, Vienna, Austria, architecturally the finest street in Europe.

*752— 1884 The Imperial Museums, from the Hofburg Theatre, Vienna, Austria.

753— 1886 Imperial Armory, Vienna, Austria. The largest and finest collection in existence.

754— 1890 Lofty reception hall, Rathhaus, Vienna, Austria.

*755— 1904 The Imperial Opera, Vienna, Austria.

*756— 1910 School children's morning devotion—Val Ampezzo from Toblach, Austria.

757— 1917 The Drei Zinnen from Lago Misurina, Tyrol, Austria.

*758— 1920 An Austrian hamlet, Val Ampezzo.

759— 1935 The Ortler (12,800 feet), from Franzen-Shohe (7,180 feet), Tyrol.

*760— 1944 Marie Theresienstrasse—principal street of Innsbruck, the beautiful Tyrolian capital, Austria.

GREECE

(16 *stereographs or slides*)

*761— 9278 Athens, old and new, S. W. from Lykabettos past royal palace (left).

762— 2372 The Acropolis of Athens, Lykabettos and Royal Palace, from Philopappos monument.

763— 2378 Exquisite Temple of Nike on the parapet of the Acropolis and view northwest over Thesion, Athens.

*764— 9282 Looking east from Propylaea across ruin-strewn Acropolis to west end of Parthenon, Athens.

*765— 9285 From W. wall of the Parthenon over modern city E. N. E. to Lykabettos, Athens.

*766— 9288 Lysikrates monument, temple of Zeus and Stadion, E. S. E. from Acropolis, Athens.

*767— 2371 Splendid columns of temple of Olympian Zeus—Acropolis at W. N. W., Athens.

*768— 9300 "The mountains look on Marathon and Marathon looks on the sea" (N. E.), Greece.

769— 9305 An old dream realized at last—ship canal through isthmus E. S. E. Corinth, Greece.

770— 9309 Agamemnon's council hall in "the innermost corner of Argos," Mykenæ, Greece.

*771— 9324 Looking over modern homes in ancient Sparta, west to famous Taygetos mountains, Greece.

772— 9328 Grim defile of Langada Gorge from N. E. end, Sparta's warpath, toward the west, Greece.

773— 9349 Looking from mountain heights over Delphi and W. across Sacred Plain to distant sea, Greece.

774— 9354 "Go tell to Sparta, thou who passest by, that here, obedient to her laws, we lie."—Thermopylæ.

775— 2461 North over Phersala and the plain where Cæsar defeated Pompey (B. C. 48), Northern Greece.

*776— 2459 Mt. Olympus (9,754 feet), on whose summit dwelt the gods of ancient Greece.

TURKEY

(8 *stereographs or slides*)

(Note.—See also Turkey in Asia.)

*777—11178 From Stamboul (N.) over bridge across Golden Horn to Galata, Constantinople.

778—10572 From firemen's watch tower, over St. Sophia and Bosphorus into Asia, Constantinople.

779—11263 Turks at prayer in St. Sophia Mosque (originally a church), Constantinople.
780—11179 From Asiatic side across Bosphorus—Constantinople in distance.
*781—11180 Southeast across Bosphorus from first Turkish citadel of Europe.
*782—11297 "Step" Street—climbing up from the Bosphorus—of Constantinople.
*783—11469 Making costly Persian rugs by hand in a Persian rug factory, Constantinople.
784—11476 Persian design artists bringing out design of old faded Persian rug.

AFRICA

(54 stereographs or slides)

EGYPT

(20 stereographs or slides)

*785—11117 Splendid view of Suez Canal, showing ships passing each other.
*786— 2521 Cairo, looking S. W. across city to pyramids, Egypt.
787— 2619 A crowded street in Cairo, Egypt.
788— 2522 A "ship of the desert" passing tombs of bygone Moslem rulers, Cairo, Egypt.
*789— 2533 The road to the Pyramids—westward toward Gizeh from near Cairo.
790— 2535 King Khufu's tomb, the great Pyramid of Gizeh (from N. W.).
791— 2536 Looking up N. E. corner of Great Pyramid where tourists climb.
*792— 2537 From summit of the Great Pyramid E. over Nile Valley, Egypt.
793— 2538 Second Pyramid with crown of original casing masonry, S. W. from summit of Great Pyramid, Egypt.
794— 2541 Looking down passage to Khufu's sepulchre within the Great Pyramid.
*795— 2543 Ruins of the Granite Temple, the Sphinx and Great Pyramid (N. W.).

*796— 2551 Watching a sand whirlwind from top of Hawara Pyramid (view S. E.).

*797— 2552 An Egyptian Shaduf, the oldest of well-sweeps, lifting the Nile waters to the thirsty fields.

*798—11121 Irrigation of Nile Valley, and circular thrashing floors.

*799— 2554 "Thou shalt not muzzle the ox when he treadeth out the corn" (threshing), Egypt.

800— 2567 The most beautiful colonnade in Egypt—S. across a temple court at Luxor, Thebes.

*801— 2603 The Nilometer (measurer of inundations) on island at first cataract, Egypt.

802— 2607 Looking down (N. E.) upon the island of Philæ and its temples, from the island of Bigeh, Egypt.

*803— 2695 The great dam across the Nile at Assuan—the most gigantic masonry of modern times, Egypt.

804— 2613 Looking up the Nile (S.) across front of Abu Simbel temple.

ALGERIA

(*4 stereographs or slides*)

*805—10660 Algiers, and its zig-zag viaduct from the Mediterranean water-front.

806—11181 Algiers, general view of city and busy quay, N. Africa.

*807—11182 Elegant buildings on leading street, Algiers, N. Africa.

808—11183 Typical Moorish shop with proprietor and patrons, Algiers.

BRITISH EAST AFRICA

(*7 stereographs or slides*)

809—10482 Ivory on the way from the jungle to America, main street, Mombasa.

810—10486 Zebras favorite game of men and of lions, S. W. toward Mt. Meru.

*811—10551 Kikuyu women with water vessels (gourds) beside village storehouses.

812—11123 Strange dress of Masai tribe, married women wear wire collars.

813—10542 Sunrise exodus of the cattle from a Masai kraal at the base of Mt. Kenia.

UGANDA—1 *stereograph or slide*

*814—10559 The beginning of the historic Nile—flowing from Victoria Nyanza.

ZANZIBAR—1 *stereograph or slide*

*815—11073 Throne room of Sultan's palace, Zanzibar, East Africa.

GERMAN EAST AFRICA

(*5 stereographs or slides*)

*816—10479 A Wachagga village on the slopes of Kilimanjaro—East Africa.

*817—10481 Picking coffee in Moschi province, East Africa.

*818—10475 Climbing through a tropical jungle, gorge of Rau River.

819—11470 Pair of Nubian (three horned) giraffes, from German East Africa, Bronx Park, N. Y. City.

820—11473 Bulky hippopotamus over a ton in weight in Bronx Park, N. Y. City. (Native of German E. Africa.)

RHODESIA

(1 *stereograph or slide*)

*821—11124 Great Victoria Falls and Gorge (W.), Zambesi River.

BELGIAN CONGO

(*6 stereographs or slides*)

*822— 9947 Leopoldville on Stanley Pool, most important trade centre of the Congo Free State.

823— 9953 Lukolela Wood Post, a new river settlement almost on the equator.

*824— 9970 Canoes at Yakusu near head of Congo steamer navigation.

825— 9972 Forest trail in the heart of Africa, between Stanley and Tchopo Falls, Congo Free State.

826— 5846 Pigmies from the Congo and huts—Man whirling sticks to make fire, World's Fair at St. Louis, U. S. A.

827—11472 Chimpanzees, most man-like of the apes (natives of the Congo), Bronx Park Zoo, N. Y. City.

BRITISH SOUTH AFRICA

(11 *stereographs or slides*)

*828—11127 Cape of Good Hope, swept by waves from the Atlantic and Indian Oceans.

*829— 2711 Cape Town and Table Mountain, west from foot of Signal Hill.

*830— 2773 South Africa Light Horse, coming down Adderly Street, to entrain for the front, Cape Town.

*831—11126 Sheep grazing on the great veldts of British South Africa.

832— 2837 Looking into the Orange Free State—over 12th Brigade Camp and Signal Hill, Slingersfontein, S. A.

*833—11058 Some of the 4,000 employees in the De Beers Diamond Mines, Kimberley.

834— 2734 Sorting the rough diamonds, De Beers Mines, Kimberley.

*835— 2932 Lord Roberts' army advancing toward Johannesburg—84th Battery and Balloon Corps, S. A.

836— 2738 In the great ore-crushing mill of the Robinson Mine—the richest gold mine of Johannesburg, S. A.

837— 2737 Precipitating vats, extracting gold from the ore, Robinson Mine (the world's richest gold district), Johannesburg, S. A.

838— 2762 Training for war—a Zulu rush—Zululand, South Africa.

ASIA

(143 *stereographs or slides*)

TURKEY IN ASIA

(44 *stereographs or slides*)

ASIA MINOR—1 *stereograph or slide*

839—10993 Smyrna, chief city of Asiatic Turkey and its harbor, north from Mt. Pagus.

SINAI PENINSULA—3 *stereographs or slides*

840—10806 Mount of Moses, where the Law was given to Israel's leader, Sinai Wilderness.

841—11184 Oasis of Firan, largest in Sinai Wilderness, S. to Mt. Serbal.

*842—11185 Oasis of Elim, where the Israelites found water —halt of a caravan to Sinai.

PALESTINE—13 *stereographs or slides*

843—10852 Relief map of Palestine by the Pal. Ex. Soc.—vertical scale, 3½ times greater than horizontal.

*844— 3081 The bazaar of Jaffa on a market day, Palestine.

845— 3242 Plowing in the fertile Plain of Sharon, Lydda, Palestine.

846— 3098 Christian Street—motley life in the Holy City's bazaar district, Jerusalem.

847— 3250 Jerusalem, "beautiful for situation" from S. E., showing Temple site.

848— 3276 A caravan of camels, in the narrow road approaching Jaffa, Palestine.

849— 3123 Picturesque Palestine—the Wilderness of the Scapegoat, Judea.

850— 3124 On the north shore of the Dead Sea—looking S. W.—Palestine.

*851— 3139 Women grinding at the mill—Palestine (St. Matt. xxiv:41).

852— 3144 "Joseph's well"—Dothan, Palestine (Gen. xxxvii:12-36).

853— 3163 Life on the shore of Galilee, at Tiberias, Palestine.

854—10884 Plain of Gennesaret and the Sea, N. from above Magdala to Upper Galilee, Palestine.

*855— 3167 The Jordan's main source—one of the world's largest springs, at Dan, Palestine.

SYRIA—17 *stereographs or slides*

856— 3175 Colossal remnants of the Sun Temple—the grandest of antiquity, Baalbek, Syria.

*857— 3177 The covered street called "straight" from the east, Damascus (Acts ix:10-17).

*858— 3178 The inner court of a Damascus home, Syria.

*859— 3409 A caravan camp at old Damascus, Syria.

*860— 3412 A swordmaker of Damascus, whose swords were once considered the finest in the world, Syria.

*861— 3416 Bread-making in the court of a Syrian home, Palestine.

*862—10921 Bedouin women churning milk—typical interior of a big tent.

*863—10898 A Bedouin camp in the mountains of the Abarim, highlands of Moab.

Silk Culture and Primitive Manufacture—8 *stereographs or slides*

*864—11432 Feeding silk worms their breakfast of mulberry leaves, Mt. Lebanon, Syria.

*865—11128 Silk cocoons woven in the mulberry branches (near view), Antioch.

*866—11130 Deadening worms in silk cocoons by steam, Antioch, Syria.

867—11133 Purchasing cocoons for export, Syria.

868—11433 Boiling cocoons to loosen fiber ends in Syria's largest silk reeling plant, Mt. Lebanon.

*869—11434 Gathering the silk ends fine spun as cobwebs, and connecting with reels, Syria.

*870—11435 In a Syrian silk plant, examining and weighing raw silk, ready for export.

*871—11467 A skilled Arab weaver and his primitive loom, weaving the finest of Syrian silk.

872—11468 Cedars of Lebanon, scions of mighty groves that supplied wood for Solomon's Temple, Syria.

MESOPOTAMIA—10 *stereographs or slides*

Euphrates Valley—4 stereographs or slides

873—11487 Desolate ruins of mighty Babylon, showing palace of Nebuchadnezzar (sixth century B. C.).

*874—11503 The traditional "Garden of Eden," looking east over the Euphrates Valley, 250 miles N. W. of Babylon.

*875—11245 Irrigation on the Euphrates, where men have toiled since Adam left Eden.

*876—11248 "The waters assuaged" (Gen. 8:1), great plains left after floods in Euphrates.

Tigris Valley—6 stereographs or slides

877—11488 S. E. over site of Nineveh, showing Tomb of Jonah, Mesopotamia.

878—11489 East over Tigris to mound of Nineveh, showing wool-laden keleks and arched bridge, Mosul.

879—11484 A brick factory near Nineveh—making sun-dried bricks, Mesopotamia.

*880—11486 Building the peculiar round boats called "Kufas," on the Tigris River, at Bagdad.

*881—11485 Pontoon bridge and odd round boats called "Kufas," on the Tigris River, at Bagdad.

882—11483 Peculiar double-decked horse cars on a suburban street, Bagdad, Mesopotamia.

INDIA

(35 *stereographs or slides*)

*883— 3421 The most magnificent railway station in the world, Bombay.

*884— 3458 India of to-morrow, handsome schoolboys of Amritsar, at the Golden Temple.

*885— 3449 An earthly Paradise, famous Vale of Cashmere, watered by the winding Jhelum, India.

*886— 3452 Shelling rice, and gossiping with the neighbors—home life of contented citizens of Cashmere.

*887— 3453 Humble shawl-weavers at Cashmere patiently creating wonderful harmonies of line and color.

888— 3463 Inflating bullock skin boats—for crossing the swift Himalayan River, Sutlej, N. India.

889— 3519 Twenty-woman team on Darjeeling highway (N.). Who would not be a man in India?

890— 3622 Bhutanese milkman with curious bamboo jars, at the public water fountain, Darjeeling, India.

*891— 3520 Up to the everlasting snows of Mt. Kinchinjanga (28,156 feet), north from Darjeeling, India.

892— 3496 Clean and airy Chowringhee Road (Esplanade at left), looking N. over Calcutta, India.

893— 3495 Welcome fellows in thirsty India—Bheestis (water carriers), Calcutta.

894— 3500 Street showmen exhibiting superbly handsome snakes, Calcutta, India.,

*895— 3499 How Hindu cows enjoy life in Calcutta, sidewalk scene on Harrison Street, India.

896— 3504 Famous "man eater" at Calcutta—devoured 200 men, women and children before capture, India.

*897— 8453 Among the aerial roots of a single banyan tree, 1000 ft. in circumference, Calcutta, India.

898— 3490 Benares, religious centre of India, N. E. down Ganges from minaret, Aurangzib Mosque.

*899— 3473 A marvel of beauty—looking N. to Taj Mahal, Agra, India.

900— 3474 Most beautiful marble screen in the world, Taj Mahal, Agra, India.

901— 3484 Great Durbar Hall in palace of H. H. the Maharaja of Gwalior, one of India's richest princes.

902— 3465 Curiously rigged camel wagons, E. side of largest Mohammedan Mosque in the world, Delhi, India.

*903— 3467 Devout Mohammedans prostrate at prayer time —Jumma Musjid, India's greatest mosque.

*904— 3468 The fabulous wealth of India—native Princes in the grand state entry, Durbar, Delhi.

905— 3443 How beauty takes the air—Indian "reet" or bullock carriage used by ladies of rank, Ulwar.

*906— 3510 Substantial elegance of modern Madras—Law Court Buildings, view from Bank, India

BURMA—(*India*)—11 *stereographs or slides*

907— 9014 Elephant laborers piling timber in one of the great riverside yards at Rangoon, Burma.

*908— 9016 Freight handlers and the thousands of tons of rice which they have unloaded, Rangoon, Burma.

909— 9024 Towering images of Buddha, symbolizing the serenity of self-renunciation, Pegu, Burma.

*910— 9027 450 pagodas treasuring copies of Buddhist scriptures, Mandalay, Burma.

911— 3820 Splendid honors to a dead Buddhist—elevating coffin to car to a gilded shrine, Mandalay, Burma.

*912— 9035 Burmese natives dredging the river-bed and searching dried gravel for rubies, Mogok, Burma.

913— 9040 Gokteck Gorge, the old haunt of jungle beasts, with railway 1,000 ft. overhead, North Burma.

914— 9047 Hauling timber with buffaloes and bullocks from Irrawaddy river near Pagan, Burma.

*915— 9051 Oil wells worked with American machinery at Yanangyet, Burma.

916— 9052 Timber raft coming down the Irrawaddy river —the floating home of a group of natives, Burma.

917— 3829 Washing plant of the Burma Ruby Mining Co. washing gravel from the rich mines of Mogok, Burma.

CEYLON

(*27 stereographs or slides*)

918— 3735 Beautiful work from crude tools—native goldsmiths at work, Kandy.

919— 3736 Grinding moonstones in Kandy, where are found the finest in the world.

*920— 3742 Country home with paddy field and natives harvesting rice, Ceylon.

*921— 3740 Charming valleys and mountains of Interior Ceylon—at Katugastota, near Kandy.

*922— 3743 Coolies picking coffee on Sir Thomas Lipton's estate, at Dambutenne, Interior Ceylon.

923— 3745 An elephant "Siesta"—basking in the sun in their beautiful native home, Interior Ceylon.

*924— 3749 Native farming in tropical Ceylon—plowing a paddy field.

925— 3751 Tame elephants breaking down timber in stockade after "drive in" Kraal—1902, Ceylon.

*926— 3755 An elephant mother six months after capture, and her babe one month old, Ceylon.

CHINA

(27 *stereographs or slides*)

927— 4111 Looking across the Bay to Kowloon and mainland, from Bowen Road, above Hong Kong.

*928— 4112 Looking down the Chukiang River into the homes of the 400,000 boat population of Canton, China.

*929— 4121 Mission children, with one little American girl, Canton, China.

930— 4125 From the Imperial Bank of China (N.) along Whangpoo River, Shanghai, China.

*931— 4127 Rich native bazaars on Nankin Road—principal Chinese street of Shanghai, China.

*932— 4144 Coolies unloading tea at Hankow—the great Tea Market of interior China.

933— 4147 Paddy fields and group of jeering natives, at Matin, 700 miles inland, Kiangsi Province.

*934— 4151 Cultivated Bamboo—a plantation at Nankin, China.

935— 4173 Wheelbarrow transportation—China's best and cheapest freighters, Tientsin.

936— 4177 Junk Flotilla on the Pei-ho River—transporting U. S. Army stores from Tientsin to Peking, China.

937— 4178 West from Ha-ta-men (gate) along huge ancient Wall between Tartar and Chinese Peking, China.

*938— 4181 One of the typical "freight trains" of China—Caravan from Tientsin, China.

939— 4223 A busy thoroughfare—from Drum Tower (east) to Tung Chi-men Gate, Peking, China.

940— 4188 Looking south over the Palaces of the Forbidden City, from Mei-shan, Peking, China.

941— 4189 Count Von Waldersee, escorted by officers of the Allied Armies through lines of U. S. Infantry, toward Sacred Gates, Peking, China.

942— 4205 Grand Porcelain Tower—one of the splendid buildings of the Imperial Summer Palace, near Peking, China.

*943— 4234 Bride and groom in China.

MANCHURIA—(*China*)—10 *stereographs or slides*

*944— 4367 China's old barrier against Tartar hordes—Great Wall crossing the mountains, Shan-hai-kwan.

945— 4376 Clumsy Chinese junk under full sail on the Yellow Sea—coast of Manchuria in distance.

Russo-Jap War—8 *stereographs or slides*

*946— 4381 Doorway for a great power—entrance to one of Asia's best harbors—Port Arthur, Manchuria.

947— 4399 Japanese war balloon reconnoitering the Russian position at Port Arthur (looking north).

*948— 7582 A 500-lb. death-laden shell from a Japanese gun, starting over the hills into Port Arthur.

949— 7585 History's greatest bombardment—shells from 200 Japanese guns shattering E. Keikan fort, Port Arthur.

950— 7716 Explosion of a Russian earth-mine seen from Ehrlungshan—W. over Port Arthur.

951— 8108 Japanese soldiers overlooking the town and harbor captured by their heroism, Port Arthur.

*952— 8112 Expecting an attack from Russian cavalry—alert Japanese near Tehling, Manchuria.

953— 7744 Working for peace—President Roosevelt and envoys of Mikado and Czar on the Mayflower.

JAPAN

(*28 stereographs or slides*)

954— 3849 East over Mississippi Bay, where Perry came (1854) near Yokohama, Japan.

*955— 3847 Peasants cutting millet, view east across field to farmhouse near Yokohama, Japan.

*956—11110 Sacred Mount Fujiyama, Japan—the world's most perfect volcanic cone.

957— 3856 Peering from the lava-encrusted rim down into Fujiyama's crater, Japan.

958— 3857 Two miles above the clouds—from Fujiyama N. E. over Lake Yamanaka, Japan.

959— 3953 A part of Tokyo's 100 square miles outlook N. W. from Amgo tower near Shiba Park, Japan.

*960— 3860 Burden bearers of Japan—a street scene in Tokyo.

*961— 3861 Under the cherry blossoms—N. E. in Shiba Park, Tokyo, Japan.

*962— 3864 Serene simplicity of home of Count Okuma, one of the Mikado's richest subjects, Tokyo, Japan.

963—11111 A Japanese hostess serving dinner in a typical Japanese home.

*964— 3881 "The groves were God's first temples"—avenue of noble cryptomerias, Nikko, Japan.

965— 3883 Japanese lady in a yama-kago (mountain chair) crossing Dalya river, Nikko, Japan.

*966— 3903 W. side of Yasaka Pagoda, 300 years old, towering over narrow street, Kyoto, Japan.

*967— 3904 "Under the bamboo trees"—looking S. W. through the famous avenue near Kiyomizu, Kyoto.

968— 3906 A potter and his wheel—fashioning a vase; Kinkosan works, Kyoto.

*969— 3908 Expert workmen creating exquisite designs in cloisonné, Kyoto.

*970— 3909 South over gardens from home of Mr. Y. Namikawa, Kyoto, Japan.

*971— 9775 Pulling up young rice ready for transplanting—Spring work on a Japanese farm.

*972— 3914 Patient laborers transplanting rice-shoots on a farm in beautiful interior of Japan.

*973— 3915 Girls picking tea on a plantation at Uji, among the sunny hills of old Japan.

*974— 3933 Flailing barley beside a fishing beach on the Inland Sea, looking S. E. to Oshima Island, Japan.

*975— 3935 Looking W. toward Kumamoto across fertile rice-fields in the old crater of Aso-San, Japan.

976— 3936 Watching an eruption of steam and boiling mud halfway up the volcano of Aso-San, Japan.

*977— 3937 Gazing through sulphurous vapors into the crater's frightful depths, Aso-San, Japan.

978— 3939 Coaling the Pacific Mail S. S. "Siberia," Nagasaki, Japan.

KOREA— (*Japan*)—3 *stereographs or slides*

979— 4486 Among the queer Koreans—a pack train in the suburbs outside Seoul, Korea.

*980— 4505 House-building in Korea—wall of stone and mud against a framework of grass-ropes and sticks, Seoul.

*981— 4511 The "Hermit Kingdom" awakening—boys' school, Seoul, Korea.

OCEANIA

(19 *stereographs or slides*)

AUSTRALASIA

(15 *stereographs or slides*)

AUSTRALIA

(10 *stereographs or slides*)

*982—11112 Melbourne, capital of Victoria and largest city in Australia.

*983—10238 The fashionable shopping district, Collins Street at Swanston Street, Melbourne, Australia.

984—10245 A boxing kangaroo, one of Australia's famous "old men," in the Zoo, Melbourne.

*985—10254 Where a sheep is shorn in five minutes by electrical machinery, Newmarket, Australia.

986—10255 Dalgetty's salesrooms, where wool-buyers come from all parts of the world, Australia.

*987—10258 One of the most fertile valleys in the continent—S. E. from Tower Hill over Koroit, Australia.

988—10263 A gold mine in the heart of a beautiful city—view W. across Bendigo, Victoria, Australia.

989—10268 The General P. O., one of Sydney's finest municipal buildings, N. S. W., Australia.

*990—10275 Sons of Australia's aboriginal huntsmen and warriors, with their boomerangs.

991—10285 Drink for 5,000 thirsty sheep on a big ranch at Warrah, Australia.

TASMANIA

(1 *stereograph or slide*)

*992—10294 Acres of hop vines on a prosperous farm at New Norfolk, Tasmania.

NEW ZEALAND

(4 *stereographs or slides*)

993—10308 Girls of the old Maori race, as they are to-day under British training, Auckland, New Zealand.

*994—10315 The geyser basin and Rotorua Lake from the mountain at Whakarewarewa, New Zealand.

995—10316 Where the world's fiery heart still burns—boiling pool of Pohutu geyser, New Zealand.

996— 4666 Mount Elliot and Jarvois Glacier, from McKinnon's Pass (6,200 feet), New Zealand.

JAVA

(4 *stereographs or slides*)

*997— 9083 Sudanese, the native inhabitants of West Java, near Hotel Villa Dolce, Garoet, Java.

998— 9076 Avenue of canary trees, covered with gigantic creepers, botanical gardens, Buitenzorg, Java.

999— 9093 Boro Boedeor, "the most remarkable and magnificent monument Buddhism has ever erected," Java.

FIJI ISLANDS

(1 *stereograph or slide*)

*1000—8098 Feast day in the Fiji Islands—natives gaily bedecked for their national dance.

AGRICULTURE

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272 STEREOGRAPHS OR SLIDES WITH 314 REFERENCES TO THEM.

The stereographs or slides in this group have been selected to show the different phases of agriculture in the various countries of the world. The classification that has been followed is the natural one that would be used in teaching the subject.

Beginning with soil formation, followed by drainage and cultivation, then with crop production, followed with live stock production and the manufacture of agricultural products, the natural course of agricultural activities is followed.

Modern and primitive methods as practised in different countries are shown, giving an insight into the agricultural life of the people. The series will be especially valuable in giving the student a definite and a correct idea of the character of the agriculture of different nations.

Much supplemental material will be found under

cross reference heads; as, for instance, "Geology," "Industries," "Transportation," "Animals," "Physical Geography," and "Zone Life."

The numbers here used refer to the serial numbers in the upper right-hand corner of the stereographs and on the slides. The starred numbers are the ones included in the 600 series.

NOTE.—Teachers desirous of additional material on *agriculture* are advised to write for further lists.—THE PUBLISHERS.

SOIL FORMATION

Our soils have been formed by the breaking down of rocks due to erosion, glacial action or the slower process of weathering as the result of exposure to air, frost and other natural phenomena. The more important methods of soil formation are shown in the stereographs or slides following. For more extensive material see the *Physical Geography Classification.*

THE EROSION OF ROCK

289 The talus slopes of El Capitan, Yosemite Valley.
65 Shale in Watkins Glen, New York.
277 Indian Gardens, Grand Canyon of Arizona.
*472 Oroya River, Peru.
382 At base of Mt. Stephen in British Columbia.
588 Rustoen Falls, Norway.
872 Vicinity around Mt. Lebanon, Palestine, showing the early stages of erosion.
*876 The upper Euphrates.
*792 The Nile delta.

175 Delta of the Mississippi River.
*483 Fan delta in Peru.
*716 Fan delta on Lake Geneva.
*724 Fan delta at foot of La Brevent, Switzerland.

ERODED LAVA

*272 Lava ash formation in Red Mt., Arizona.
*975 A rice field in the crater of Aso-San, Japan.
*403 West from Pueblo, Mexico.
*731 Lava beds that may some day be alluvial soil, Italy.

GLACIAL WASH

*721 Rocks on Mer de Glace, Switzerland.
*590 At lower end of Kjendal Glacier in Norway.

UPLIFTED SANDY SEA BOTTOMS

*150 Soil of an uplift plain in North Carolina.
59 A truck farm in Long Island.
152 Sea marsh in South Carolina.
*166 Pine-grown sand levels at Daytona.
*170 Plowing at Tuskegee.
*10, 11 Sand dunes of Cape Cod, Mass.

SOIL DRAINAGE AND IRRIGATION

Control of the water supply is the fundamental to successful agriculture. Examples of natural drainage are shown in the stereographs or slides as well as ancient and modern methods of irrigating growing crops.

DRAINAGE

*524 The River Teme, which drains the country about Ludlow, England.
*548 The winding Forth River in Scotland.

619 The Dnieper River in Russia.
*633 In the Valley of the Danube, Germany.
*651 In the flax fields of Belgium.
*885 The Vale of Cashmere in India.

IRRIGATION

(*General*) *803 The great dam at Assuan, Egypt.
*797 Egyptian well sweep lifting the waters of Nile to the farms on its bank.
*875 Irrigation on the Euphrates River in Mesopotamia.
*798 Irrigation in the Nile Valley, Egypt.
675 An old aqueduct at Segovia, Spain.
695 An old aqueduct in Portugal.
(*For Rice*) *182 Irrigation in the rice fields of Texas.
*357, *972 and 933 Flooded rice fields in the Orient, showing dikes built to separate one portion of the field from another.
(*Strawberries*) *303 Irrigating a strawberry field, Hood River Valley, Oregon.
(*Sugar-Cane*) *469 Irrigating a sugar-cane field in Peru.

SOIL PREPARATION

Showing methods used in the different countries of the world and the different kinds of animals used for motive power.

845 Plowing with crooked sticks, an ox-team and a camel, in Palestine.
*460 Plowing with oxen in Ecuador.
*414 Farm hands spading soil in Mexico.
*357 Plowing a rice field in Luzon, with a water buffalo.
*924 Elephant used to plow a field in Ceylon.

*216 Plowing on a prairie farm in Illinois.
528 Plowing with a modern plow drawn by a gasoline motor in England.

PLANTING AND CULTIVATION OF CROPS

Showing the planting and cultivation of some of the tropical and subtropical crops.

*971 Pulling up young rice shoots ready for transplanting, Japan.
*972 Transplanting rice in Japan.
(*Sugar-Cane*) *469 Planting sugar-cane in Santa Clara, Peru.
(*Sugar Beets*) *626 Hoeing the sugar beet crop in Germany.
(*Rice*) *975 Hoeing rice in a field in Japan.

FARM CROPS

The stereographs show a great variety of farm crops, including fruits growing under diverse conditions. These stereographs will be especially valuable in giving the student a correct impression of the character of the agriculture in different nations.

GRAINS

*549, 550 Fields of waving grain in the beautiful Forth Valley, Scotland.
(*Maize*) *193 A great corn field, Kansas.
(*Wheat*) *309 In a great wheat field, Washington.
(*Rice*) *921 Overlooking large field of growing rice in Ceylon.
933 A field of rice in the interior of China.
*975 Rice growing on the cone of an extinct volcano, Japan.

(*Oats*) *601 A field of oats in Sweden.
477 Corn and other growing crops in the Plateau land of Peru.

SUGAR

429 A sugar-cane plantation at Caracas, Cuba.
*626 Sugar beet field in Germany.

FRUITS

(*Orange*) *279 Redlands and its wealth of orange groves.
*280 Close view of an orange grove in Riverside, California.
*281 Close view of the flowers and fruit of the orange tree in California.
(*Lemon*) *744 A lemon grove in Sicily.
(*Citron*) 433 Close view of citron trees showing the fruit, Jamaica.
(*Breadfruit*) *420 Breadfruit on the trees in Costa Rica.
(*Mango*) 401 Mango trees in fruitage, Mexico.
(*Date Palms*) *686 Heavily laden date palms at Elche, Spain.
(*Grape*) *661 Grape vineyards in France.
*635 Terraced vineyards on the Rhine in Germany.
(*Banana*) *417 Overlooking the largest banana plantation in the world.
*344 A large banana plantation in the Hawaiian Islands.
(*Pineapple*) *323 In a field of luscious pineapples in Porto Rico.
(*Raspberries*) 310 A field of red raspberries in Washington.
(*Strawberries*) *303 In a great strawberry field in Washington.

NUTS

*167 Cocoanut palms loaded with nuts in the white sands of Florida.

*168 Nuts and blossoms of the cocoanut palms, Florida.
*330 Cocoanut palms in Panama.
341, *343 Cocoanut palms in Hawaiian Islands.

MISCELLANEOUS

*431 In a tobacco field in Cuba.
630 A great field of hops in Bamberg, Germany.
*992 Hops grown on a large scale in Australia.

HARVESTING AND PREPARING CROPS FOR MARKET

A greater range is found in the amount of human labor expended in the harvesting and preparing crops for market than in any other operation of agriculture. The stereographs illustrate this point by showing the most modern and most primitive methods in use.

PRIMITIVE METHODS OF CUTTING GRAIN

674 Cutting wheat with a sickle, Spain.
*566 Cutting grain with a sickle in the Island of Achill, Ireland.
*601 Cradling oats in Sweden.
*920 Harvesting rice by hand in Ceylon.
*955 Gathering the heads of millet in Japan.

MODERN METHODS OF CUTTING GRAIN

*309 Modern American harvester in great wheat fields of Washington.
*181 Harvester cutting rice on a big plantation in Texas.
*200 20th Century harvester cutting corn in Michigan.

HAULING GRAIN FROM FIELD

630 Drawing barley from the field in Germany.
652 Harvest time on the "Field of the Cloth of Gold," France.
*182 Hauling rice to the thresher in Texas.
*376 Hauling wheat to the thresher in Manitoba.
*566 Women carrying the grain from field—Island of Achill, Ireland.
*527 Drawing, unloading and stacking hay in England.

METHODS OF THRESHING GRAIN

(*Primitive*)

*974 Flailing barley in Japan.
*798, *799 Treading out the grain by ox and camel, and the circular threshing floors, Egypt.
671 Winnowing the grain in France.
*886 Shelling rice in Cashmere, India.
329 Pounding rice in the Isthmus of Panama.

(*Modern*)

*376 Threshing wheat in Manitoba.
*377 A modern thresher in the wheat fields of Manitoba, showing sacking of the grain.
183 Steam thresher at work in a rice field in Texas.

CURING HAY

*578 Hay hung up to receive the direct rays of the sun, Norway.
*609 Hay curing in Russia.
*527 Stacking hay in England.

CURING FLAX AND HEMP

*650 Flax in great stacks curing in the field, Belgium.
*651 Flax taken from the stacks and soaked in the river, Belgium.
*361 Drying hemp on the Island of Cebu, P. I.

HARVESTING SUGAR-CANE

*470 Cutting and hauling the sugar-cane in Peru.
*430 Hauling carloads of sugar-cane to the mill, Cuba.
*435 Crude method of grinding sugar-cane in Jamaica.

POTATOES

59 Digging potatoes by hand on a large truck farm on Long Island.

TOBACCO

*431 Cutting tobacco in Cuba.

COFFEE

*922 Picking coffee in Ceylon.
*817 Picking coffee in East Africa.
*408 Crude native method of husking coffee, Mexico.
*407 Drying coffee on large drying floors.

TEA

*973 Girls picking tea in Japan.

CACAO

*419 Gathering the cacao beans in Jamaica.
418 Drying the cacao beans in Jamaica.
*457 Drying cacao beans in Ecuador—material for 224,000 lbs. of chocolate.

COCOANUTS

*168 Nuts and blossoms of the cocoanut, Florida.
324 Husking the crop of cocoanuts in Porto Rico.

GATHERING FRUITS

*686 Picking dates at Elche, Spain.
*280 Picking oranges at Riverside, California.

*281 Flowers and fruit of an orange tree, California.
*744 Picking lemons in Palermo, Sicily.
*434 Gathering bananas on a plantation in Jamaica.
310 Picking red raspberries in Puyallup, Washington.
*691 Gathering the famous malaga grapes, Spain.
433 Picking citron in Jamaica.
*420 Picking breadfruit in Costa Rica.
401 Gathering the fruit of the mango in Costa Rica.

HARVESTING COTTON

*160 Picking cotton with colored help in Georgia.
*468 Chinese laborers picking cotton in Peru.
*177 Gin cleaning the cotton at a mill in Texas.
*178 Baling the cotton at a mill in Texas.
161 Hauling the cotton seed to the factory—Georgia.

GATHERING OTHER PRODUCTS

*404 Extracting pulque from the maguey plant—Mexico.
*411 Gathering the gum from the rubber tree in Mexico.
*149 Collecting resin in a pine forest of North Carolina.
*150 Sweating out the tar from the pine wood, North Carolina.
*151 Distilling turpentine from the crude resin, North Carolina.

MARKETING FARM CROPS

Showing methods of marketing farm products in the different countries of the world.

GRAINS

*908 Handling tons of rice in Rangoon, Burma.
*215 Grain elevators in Chicago.
*378 Grain elevators in the great wheat fields of Manitoba.
*375 Overlooking Winnipeg, the great wheat mart of the Northwest.

FRUITS

*331 Boatloads of bananas on the Chagres River, Panama.
808 Market in Algiers.
*844 The bazaar of Jaffa on a market day, Palestine.

OTHER CROPS

*932 Unloading tea at Hankow, China.
935 Wheelbarrow freight handlers in China.
*173 Sugar levee at New Orleans.
*188 Levee at St. Louis, Missouri.
162 Two-wheeled cart in St. Augustine, Fla.
455 Shipping rubber, Para, Brazil.
*159 The greatest resin market in the world, Savannah, Ga.
*363 Hauling hemp in the Philippine Islands.

(NOTE.—For further study along this line, see series of "Transportation," also the one on "Industries.")

LIVE STOCK

The stereographs and slides show the live stock industry as it is carried on for different purposes. For example, dairying in Holland, cattle ranching in Canada, sheep ranching in Australia, and live stock kept in general farming in the corn belt of North America.

The teacher will find the stereographs and slides especially valuable in fixing in the student's mind the sources of our animal products and the contrast between intensive systems of farming as practiced in the European nations and the extensive systems practiced in western Canada and United States, as well as Australia and South America.

CATTLE

(*For Beef*)

217 Fine steers grazing on the Illinois prairie.

*257 Amidst the 30,000 head of cattle on the Sierra Bonita Ranch, Arizona.

258 Moving the herd on the Sierra Bonita Ranch, Arizona.

*259 Cowboys examining a yearling's brand on a ranch in Arizona.

813 Cattle kraal in Africa.

*213 The cattle in the great Union Stock Yards at Chicago, Ill.

(*For Dairying*)

551 Cows in a pasture in the Highlands, Scotland.

544 Highland cattle in pasture in Scotland.

*569 A country home in Ireland.

*592 Stock on a farm in Norway.

*585 Cows wading in the shallow waters of the Naerofjord, Norway.

664 Fine cows in pasture on the battlefield of Sedan, France.

*646 Miles on miles of peaceful pasture, where windmills beckon to each other, Holland.

757 Splendid stock—cows in pasture in Austria.

(*Milk*)

*86 Milking large numbers of cows in a modern sanitary dairy at Fairfield, N. J.

*87 Sterilizing the bottles, Fairfield, N. J.

*88 Filling the bottles by machinery, Fairfield, N. J.

*679 The cow delivering the milk on the street in Valencia, Spain.

*645 Milkmaids of Goes, with their pails of milk, Holland.

*642 Peasant women with their milk carts on a dike road in Holland.

890 Bhutanese milkmen in Darjeeling, India.

(*Butter*)

*66 Milk passing over refrigerating pipes in the separating room of a large dairy in Delhi, N. Y.

*67 Butter being delivered from the large circular churn where great quantities are churned, worked and salted at one time, Delhi, N. Y.

68 Butter being put up into pound packages at Delhi, N. Y.

606 Packing prize butter for European market in the largest dairy in the world, Hasley, Denmark.

*862 Bedouin women churning in a primitive skin churn, Syria.

(*Hides*)

445 Loading hides at Maracaibo, Venezuela.

617 Siberian hides at Nijni Novgorod, Russia.

GOATS

*586 Goats in Norway.

575 A family goat—Maan Valley, Norway.

*743 Goats milked in the streets of Palermo, Sicily.

SHEEP

*201 Prize-winning Shropshires in pasture in Michigan.

*543 Fine specimens of sheep in pasture in the Scotch Highlands.

*547 Sheep grazing in the fields below Stirling Castle, Scotland.

*483 Sheep grazing in a sunny valley in Peru.

*831 Sheep on the great veldt of South Africa.

991 Drink for 5,000 thirsty sheep in Australia.

*985 Shearing sheep by electricity (five minutes), Australia.

986 The largest wool salesroom in the world, Australia.

878 Shipping wool in bags, on the Euphrates River, Mesopotamia.

HOGS

*218 Hogs in pasture in Illinois.

*214 A half mile of dressed pork in Armour's, Chicago.

HORSES

*987 Fine horses in a pasture in Australia.
*309 26-horse team in wheat fields of Washington.
*216 Fine farm horses in the harness in Illinois.
*200 Fine team on a Michigan farm.
*182 Horses in the rice fields, Texas.

OTHER STOCK

*569 Donkeys and ducks at a country place in Ireland.
*283 Ostrich farm in California.
*473 Llamas in Peru.
565 Donkeys on the Island of Achill, Ireland.

WOODLAND AND FOREST PRODUCTS

The different ways in which lumbering is carried on in the forests of the world is illustrated in the stereographs and slides, and they show the magnitude of the industry in a way that cannot be described in words.

LUMBERING

300 Big tree lumbering in California.
*305 Shooting logs down a mountainside to the water, Oregon.
385 Logs in the Klondike River, Alaska.
*304 Stupendous log-raft on the Columbia River, Oregon.
*384 Fallen timber on the mountainside in British Columbia.
*383 In a clearing in British Columbia.
*166 Hauling logs in Florida.
914 Hauling timber in Pagan, Burma.
907 Elephants piling timber in Rangoon, Burma.
224 A sawmill at Minneapolis, Minn.
*219 Cutting logs with a circular power saw at Marinette, Wis.

362 Sawing timber in Cebu, P. I.
*225 Great stacks of lumber at Minneapolis, Minn.
*186 A typical log cabin such as were built in the early part of the 19th Century.

FIREWOOD

*219 Sawing off logs with a circular power saw.
823 Transporting firewood in the Congo.
405 Fuel gatherers in Mexico.
*525 An old-fashioned fireplace for burning logs, in Shakespeare's home in Stratford-on-Avon, England.

CORK

*681, 682, *683 The growth of cork oaks, and preparation of the bark, Spain.

BAMBOO

*934 Cultivated bamboo at Nanking, China.
*967 Under the bamboo trees in Japan.

MANUFACTURING AGRICULTURAL PRODUCTS

The manufacture of agricultural products is as important as their production, and the stereographs or slides show some of the more important agricultural manufacturing industries. All human clothing is made from agricultural products and the manufacture of fiber into cloth is especially illustrated in this series.

SILK CULTURE

*864 Feeding silk worms mulberry leaves.
*865 Hatching silk cocoons on mulberry branches.

*866 Deadening worms in silk cocoons.
867 Purchasing cocoons.
868 Boiling the cocoons to loosen fiber ends.
*869 Gathering the silk ends and reeling the silk.
*870 Examining and weighing silk for export.

SILK MANUFACTURE

Shown very completely in the stereographs Nos. 92 to 104 and 871. For details see *Products and Industries* list.

MAKING WOOL INTO CLOTH

17-24 inclusive. For details, see *Products and Industries* list.

MAKING COTTON INTO CLOTH

154-158 For details, see *Products and Industries* list.

MAKING WOOD INTO PAPER

220-222 For details, see *Products and Industries* list.

SUGAR FACTORY PROCESSES

89-91 and 210, 211 inclusive. For details, see *Products and Industries* list.

FARMS AND FARM BUILDINGS

Showing the character of the farm homes and buildings used in the different parts of the world.

26 A pretty country place in New Hampshire.
*56 Fine old stone farmhouse on the Hudson River, N. Y.
202 Farmhouses on Lake Michigan, Mich.
382 At the base of Mt. Stephen, British Columbia.
*458 A country home in Ecuador.
*526 A snug country home in England.

*569 The home of a prosperous farmer in Ireland.
575, *579, 581 Country places, Norway.
*618 Country house in Russia.
706, *724 Farm life in Switzerland.
*758, 759 Neat and tidy farms in Austria.

WELLS, WINDMILLS, ETC.

852 Joseph's well on the Plains of Dothan, Palestine.
*642, *646 Windmills in Holland.
*797 An Egyptian shaduf or well sweep, Nile Valley, Egypt.
575 A well sweep on a farm in the Maan Valley, Norway.

COUNTRY ROADS

Good public highways are vital to a successful agriculture. The stereographs show some typical roads under different conditions.

26 Country road near Franklin, New Hampshire.
*166 A typical country road in Florida.
235 Country road at Gardiner, Montana.
*253 A mountain road in Colorado.
*273 A road of shifting sand on the great Painted Desert, Arizona.
*282 Magnolia Avenue at Riverside, California.
*576 A country road in Norway.
*632 Roads in the rural districts of Germany.
*756 A country road in Austria.
*768, 774, 775 Country road in Greece.
889 Making roads near Darjeeling, India.
*473 A country road in the Peruvian Highlands.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

ANIMALS

EDITED BY

JOHN BURROUGHS,

AUTHOR AND NATURALIST.

134 STEREOGRAPHS OR SLIDES WITH 143 REFERENCES TO THEM.

One hundred and forty-three stereographs or slides selected to show various animals from the different parts of the world, both domestic and wild. Intended primarily for use in the lower grades.

Natural History, as a science, has never been given a place in the public school curriculum. As a rule, the lower grades are the only ones which give children any chance to make acquaintance with the two-legged, four-legged and no-legged creatures that share this world with us. The subjects of animal life included in this series have been chosen with a view to their interest for young boys and girls. They give a chance for pupils with the most restricted personal environment to know:

1. Some animals that are the habitual companions or fellow-workers of man.
2. Some animals that supply man with fundamental necessities of life.

3. Some animals that figure largely in familiar stories and legends.
4. Some animals whose form or habits are specially picturesque and impressive.

Publishers' Note:

The notes below are supplemented by the descriptions on the backs of the stereographs.

The numbers refer to the serial numbers in the upper right-hand corners of the stereographs and on the slides. Those numbers preceded by a star (*) are the ones included in the *Special* 600 series.

The animals listed below are simply those included in our 1,000 series. The teacher is referred to the much wider and richer treatment of animals and birds which we are able to give in our general catalogue.

ALLIGATORS AND CROCODILES

These reptiles of the crocodile family are at home both on land and in water. They have short legs for walking and long, flexible tails for swimming, with an extraordinarily tough scaly hide, parts of which are thickened and hardened like protective plates of bone. They breathe air into lungs, but have cold blood. They live in tropical and semi-tropical countries, laying eggs in nests of sand, to be hatched by the warmth of sunshine. Crocodiles and alligators are near relatives; both are found in Florida.

163 In the Florida jungle.

APES

Creatures that have all four limbs finished more like hands than like feet form a class by themselves, including a wide variety of apes, monkeys and kindred animals. The apes have no tails. American monkeys have tails. Most of them can,

if necessary, walk upright like men, though they are much more inclined by habit to go on all fours. Chimpanzees are West African apes that grow to a height of about four feet, and have exceptionally long arms, with tremendous muscular strength. Their bodies are covered with short, dark-brown hair, but the skin of their hands is practically bare and nearly flesh-color. They live mainly on fruits and nuts. Chimpanzees have a fair amount of intelligence, and can be trained to do many things as human beings do them, but, so far as our experience with them has yet gone, their rudimentary minds do not seem to be closely related to our human minds by any bond of instinctive sympathy and affection, such as we often find conspicuous in dogs and horses.

827 A pair of trained chimpanzees in the Bronx Zoo, New York City.

AUKS

These birds of cold countries live on sea food and get supplies by diving. They make comparatively short journeys in the air, for they have less wing power than our familiar singing birds, but they can swim, float and dive in water. Auks are numerous in Arctic seas off Alaska and Greenland.

**394 Little auks covering the sea – west coast of Greenland.*

BEARS

Bears have warm blood, and are carnivorous, i. e., live on flesh foods, though not exclusively. They are flat-footed, treading on the whole foot, and not, like dogs, on the toes only. They bring up families as dogs and cats do, the mothers nursing the young. Bear cubs usually come as twins, and many species take about seven years to grow to full size. The silver-tip grizzly (stereograph 239) reaches eight feet in length and 800 pounds in weight. It can swim, but cannot climb a rock or tree. Most species of bears live in northern countries, where winter is long and severe, and they spend several weeks

of the winter sleeping in caves, burrows or hollow tree trunks, without coming out for food or drink. Polar bears, in Arctic countries, are excellent swimmers and live chiefly on fish and seals.

239 Big grizzly bear at home in the wooded wilderness of Yellowstone Park.

BEAVERS

The gnawing animals—rats, mice and their numerous relatives—are equipped with teeth so strong and sharp and so generously renewed by nature, that they can do an immense amount of cutting and filing without being worn out. The North American beaver is one of the most interesting members of this family. It lives mainly on vegetable foods—berries, roots, leaves and bark; but it is so constructed as to be quite at home in the water as well as on land. Its large hind feet are webbed somewhat like a duck's, making them good, effective paddles. Its broad, flat tail is partly covered with scales. The beaver makes its home beside fresh water—a comfortable hollow, protected from other animals by thick walls of earth and sticks—and its doorway is below water-level, consequently inaccessible for land enemies. It often builds a dam of tree trunks, mud, moss and bits of driftwood, to hold back the adjoining water and keep it sufficiently deep.

51 An American beaver, industriously gnawing a piece of wood, Bronx Park, N. Y. City.

52 An excellent view of a beaver dam.

BISON AND BUFFALO

These belong to a group of animals having hoofs (i. e., few toes, and those with extraordinarily developed nails). They are near relatives of our common cattle and sheep, belonging to the same ox family—Bovidæ. They have simple (i. e., not branching) horns, and do not shed them as a deer does. They have no upper front teeth, but use cheek teeth for chewing a

cud. The bison or American buffalo, common fifty years ago on Western plains, is now extremely rare. (Stereograph 238.)

**358 Filipino wagon drawn by caraboa, P. I.*
**357 Plowing a rice field in the Philippine Islands with a water buffalo.*
363 A water buffalo drawing a load, P. I.
914 Hauling timber with buffalo in Pagan, Burma.
**238 Wild buffalo – one of America's first families – at home on a sunny slope in Yellowstone Park.*

BURROS

Animals like these are usually called asses or donkeys. The name "burro" is of Spanish origin, and is often used in our Rocky Mountain districts and in the Southwestern States, adjoining Spanish-speaking Mexico.

Donkeys are closely related to horses. They belong to the same order of Ungulata or hoofed animals, having but one toe, with a very large, thick nail. They have longer ears than the horse and a shorter mane; the hair on a donkey's tail is short near the body and long only toward the tip. The hairy hide usually shows a strip of darker color along the backbone. Donkeys (asses) are found wild in certain parts of western Asia and northern and eastern Africa. They are fed more cheaply than horses (i. e., are satisfied with poorer and scantier food), are extraordinarily hardy and very strong in proportion to their size.

275 The sure-footed little burros on a treacherous trail in Grand Canyon, Arizona.
277 The prospector and his burro in Indian Gardens, Grand Canyon, Arizona.
449 A little burro in Barranquilla, Colombia.
**450 Burros used to carry water in Barranquilla, Colombia.*
477 Pack train of donkeys in Peru.
**403 Pack burros in Mexico.*
**404 A neglected but patient little burro, Mexico.*
**461 Traveling among the Andes, Ecuador.*
**464 Gathering ice on summit of Mt. Pichincha, Ecuador.*
565 A friendly little fellow on the Island of Achill, Ireland.
**569 Two little donkeys and one baby donkey, part of the family on a farm in Ireland.*

745 Donkey at modern Syracuse, Sicily.
800 A baby donkey amid strange surroundings, Luxor, Egypt.

CAMELS

These are hoofed animals with two toes on each foot, the nails developed into the extraordinary thickness which makes "hoofs." Unlike cows, they have upper front teeth. They eat grass, grain and many sorts of leaves. Their exceptionally long legs and humped backs make them conspicuously different from other kinds of animals that perform the same service of carrying burdens. The Arabian camel (dromedary) has one hump, the Bactrian camel two. At the present time there are no really wild specimens, but the domesticated animals are common in northern Africa and southern and western Asia. An average camel can travel 70 to 80 miles a day, carrying a burden of 200 pounds and more. The structure of its stomach enables it to store up drink ahead of immediate need, and the fatty substance of its hump can be partially absorbed into the system to remedy temporary scarcity of food.

788 A "ship of the desert" outside east wall of Cairo, Egypt.
**789 Camels on the road to the Pyramids from Cairo, Egypt.*
790 Camels by the Great Pyramid of Gizeh, Egypt.
**842 Camels in an oasis in the Sinai Wilderness.*
848 A caravan of camels on the road near Jaffa, Palestine.
845 Camel used to draw a plow in Palestine.
852 Camels resting by Joseph's well on the plains of Dothan, Palestine.
**859 A caravan camp at old Damascus.*
867 Bringing in silk cocoons for export, Syria.
902 Camels hitched to curious wagons at Delhi, India.
**938 A caravan on Legation St., Tientsin, China.*

CARABAO

See Buffalo

CATS

The familiar household pet has almost precisely the same structure and the same instincts as the tiger, differing from

the tiger more in dimensions and strength than in any other way.

**56 The house cat at Washington's Headquarters, Newburgh, N. Y.*

CATTLE

Oxen and cows belong to the same family (Bovidæ) as the bison and the buffalo. All are ruminant or cud-chewing animals, with the peculiarly developed toe-nails which we call hoofs. The hoofs of cattle differ from those of horses in being divided, while a horse's hoof is all in one piece. The horns of cattle, unlike those of deer, are hollow sheaths without branches, and they are not shed and renewed like a deer's horns. Cattle have no upper front teeth. As civilization has advanced men have learned how to treat cattle in such a way as to make them grow faster, put on more flesh, give more or richer milk, and have more strength for carrying or hauling loads. The result is now a very large number of distinct breeds.

**86 Cows in a model dairy at Fairfield, N. J.*
**213 Cattle in the great Union Stock Yards, Chicago.*
217 Steers grazing in green pastures, Illinois.
**257 Among the 30,000 cattle on Sierra Bonita Ranch, Arizona.*
258 Moving a herd, Sierra Bonita Ranch, Arizona.
544 Highland cattle in pasture at Thurso, Scotland.
**569 The picturesque home of a prosperous farmer, Ireland.*
**585 Cows wading in the shallow waters of the Naerofjord, Norway.*
**592 Cows in the Vidde Valley, Norway.*
**646 Cows in pasture on the flat lands of Holland.*
664 Fine specimens of cows in a pasture in France.
**679 A cow being milked in the street little calf by her side, at Valencia, Spain.*
688 End of a bull fight in Seville, Spain.
757 Fine looking cows in a Tyrolean pasture, Austria.
813 East African cattle in a kraal.
**895 How Hindu cows enjoy life in Calcutta, India.*
**921 A cow in Ceylon.*
**166 Eight-ox team hauling logs in Florida.*
172 Rapid transit in southern Mississippi.
226 A holiday jaunt in a horseless carriage, Porto Rico.

**430 Oxen hauling cars of sugar-cane in Cuba.*
**460 Oxen plowing in Ecuador.*
696 The bullock sledges of Funchal, Madeira Islands.
845 Plowing with oxen in Palestine.
**883 Bullock cart at the R. R. station, Bombay, India.*
905 Indian reet or bullock carriage at Ulwar, India.
914 Hauling timber in Pegan, Burma.

DEER

Deer are, like cattle, cud-chewing (ruminant) animals, with divided hoofs. Their horns (antlers) are distinctly different from those of cattle, being solid, and they divide into spreading branches. They are shed and renewed every year. There are a great many species of deer, most of them in northern latitudes, living mainly on grass, roots and leaves. (Stereograph 191.)

Reindeer, found only in the far north (Norway, Lapland, Siberia, Alaska), have broader hoofs than other deer, specially adapted to treading on marshy ground and snow. Both male and female grow antlers. They pick up a living in places forlornly barren, eating mosses, grass roots and seaweeds. People of far northern lands use them like cattle for hauling sledges. Their milk and flesh are standard food supplies and their hides are made into clothing.

191 Little girls feeding tame deer and fawn on a ranch in Missouri.
**582 Herd of shy reindeer in their native haunts in far north Norway.*
**593 A family reindeer in far north Lapland.*

DOGS

All the many species of more or less domesticated dogs are descended from wolves, or from other wild creatures closely resembling known kinds of wolves. Like most (not all) of the other flesh-eating animals, their feet and legs are so constructed that they walk on their toes, their "heels" having the effect of a mere knuckle at the ankle. Dogs have five toes on the forefeet and four on the hind feet. Unlike members of

the cat family, they cannot draw in their claws. Long before men built cities they had tamed dogs, using them to help in hunting and to guard cattle and sheep. In far north lands, where draught animals are few or none, dogs are trained to haul heavy loads, but, as a rule, dogs have been simply men's companions, fellow workers and playmates. Dogs differ from most other animals in having no sweat glands, hence, when heated, they seek relief in rolling. About two hundred varieties are now recognized by specialists in dog breeding.

**56 The pet dog of an old soldier, Newburgh, N. Y.*
**108 A little girl and her faithful dog at the Delaware Water Gap.*
**389 A dog at far north Cape Sabine, Baffin Bay.*
**395 Esquimaux sledge dogs, Greenland.*
516 After a hard run with the otter pack, England.
581 The little dog is always on hand, – a humble home in Norway.
**593 A dog in far north Lapland.*
**642 A dog drawing a milk cart on a dike road in Holland.*
**643 Dignified Dutch matron with her dog team, Enkhuysen, Holland.*
**704 A dog in the street at Berne, Switzerland.*
715 World-famed monastery and dogs at the Great St. Bernard Pass, Switzerland.
**760 A helpful dog in Innsbrück, Austria.*

DONKEYS

See Burros

ELEPHANTS

Their size, their strength and the extraordinary development of their noses distinguish elephants from all other living creatures. The long and marvelously strong, flexible muscles of the trunk make that member almost as useful as an arm and hand. By drawing the breath inward through the nostrils while they are in contact with an object, the thing can readily be lifted on the principle of suction. By winding the trunk around a bulky object, the thing can be lifted as if inside a loop of rope. Elephants are still found wild in parts of Africa, India and Ceylon. They live on strictly vegetable

foods, and take nearly twenty years to reach full growth, attaining 6,000 to 9,000 pounds weight. Two incisor teeth in the upper jaw, called tusks, are very conspicuous in most species, sometimes growing 9 to 10 feet long; they furnish beautifully fine-grained bone known as ivory. Elephant hide is extraordinarily tough and durable, and has often been used in the industrial arts. Elephants were tamed and used as beasts of burden far back in the early days of Oriental civilization. Their impressive bulk and the expense of their "keep" have usually limited their ownership to chiefs and men of exceptional wealth.

**904 Fabulous wealth of India—Durbar procession, Delhi.*
923 Elephants basking in the sun in their native home, Ceylon.
**924 Native farming in Ceylon; plowing a paddy field with elephants.*
925 Tame elephants breaking down timber stockade, after drive in kraal, Ceylon.
**926 An elephant mother and her babe one month old, Ceylon.*
907 Elephant laborers piling timber in one of the great riverside yards, Rangoon, Burma.

FISHES

The known species and varieties of fishes are almost innumerable. The salmon family forms a typically interesting group of fishes that are of special economic importance to humankind. The Chenook salmon of our north Pacific coast is one of the most abundant of all edible fishes. At the present time it leads all our American fishes in commercial value.

Through the winter the Chenook salmon live in deep ocean waters. Every spring they seek fresh waters in which to raise their young, swimming sometimes a thousand miles for this express purpose and making their way up-stream against rapids. They even leap up over low waterfalls. The eggs are left on the gravelly beds of upland streams, and the old fish die. When about six weeks old the young fish begin their seaward journey. In and about the Columbia River they are 4 to 6 inches long when they reach the sea. At maturity they often weigh 20 to 30 pounds.

**307 Chenook salmon on the floor of great cannery, Oregon.*
308 Beautiful salmon in a trap at Puget Sound, Washington.

GANNETS

These are swimming birds, about the size of geese, i. e., nearly three feet long, with very strong muscular wings. They feed wholly on fish, and make their homes on steep seaside cliffs overlooking the Gulf of St. Lawrence, the Bay of Fundy and neighboring waters. They soar above the water until they have located some fish, then drop suddenly (sometimes 50 or even 100 feet), dive and seize their prey.

**368 Gannets at home on their ledges along the St. Lawrence.*

GAME COCKS

The fighting instinct is strong in most cocks, but those of certain breeds have the instinct so overdeveloped that it amounts almost to a mania. Such cocks are raised in large numbers in parts of Spain and in lands where Spanish taste in sport is particularly influential, *e. g.*, in Mexico, in South America and in the Philippine Islands.

448 Game cocks in Santa Marta, Colombia.

GEESE

Geese are so constructed as to be good both at flying and at swimming. They are near relatives both of swans and of ducks. Their muscular wings have a broad reach and the wild species take extremely long flights (in spring and fall) without rest. Geese were apparently among the very first feathered creatures that men undertook to tame and control.

**569 A flock of plump geese on a farm in Ireland.*

GIRAFFES

Giraffes (camelopards) are the tallest of living animals. In many respects they are closely related to deer. They live on the leaves of trees; they have hoofs and they chew the cud.

But their horns are so little developed as to have the effect of mere knobs on their foreheads, while their necks are so extraordinarily developed as to length, that full-grown animals can feed comfortably on tree branches 15 to 20 feet above the ground. Giraffes, in fact, very seldom take anything from the ground level. Their tongues differ from those of other cud-chewers in being peculiarly long and flexible, capable of use almost like a finger.

819 Two Nubian giraffes in Bronx Park, N. Y. City.

GOATS

Goats and sheep are closely related to each other and to cattle. They have divided hoofs, permanent horns, and they chew a cud as oxen and cows do. The mother animals produce milk in quantities large enough to be useful as a food supply for human beings.

Goats have been found wild in the hilly or mountainous districts of many countries, and have been tamed for domestic service. Wild species still roam about parts of northern Africa and North America and western and central Asia, and a few are still wild in extreme southwestern Europe. They can pick up a living in pastures too poor for cattle. Their flesh is eaten by people in Egypt, Syria, Arabia and Asia Minor, and in those same countries their hair is mixed with sheep's wool, spun and woven into coarse cloth. The hair of the Angora goat, a native of Asia Minor, is so long, flexible and lustrous as to be valuable in fine textile industries. It is the "mohair" of commerce.

575 The typical surroundings of a little house in the Maan Valley, Norway.

**586 A herd of agile goats by the side of placid Lake Olden, Norway.*

**743 Goats milked in the streets of Palermo, Sicily.*

GOLDFINCH

The goldfinch is a familiar friend in the English countryside, and, with the other finches to which it is closely related,

has figured many times in English verse. Its cousin, which is familiar to the eastern United States, and is usually known as the yellowbird or thistle-bird, is one of the many perching song birds that help put color, airy life and music into our northern summertime. Matthews describes its gay song as having a "metallic, cut-glass jingle." It sings both at rest and upon the wing. In early spring the goldfinches have a song festival or musical reunion in the treetops; a score or more of the birds gather in the top of a tree and sing in a low, twittering, chirping manner for hours at a time, returning to the treetops day after day. It is their manner of beginning the season of love and song. Later the male often sings a brief ecstatic song on the wing, flying in a peculiar level manner. During the nesting time in midsummer the male bird circles about the nesting place in a long, billowy flight, with alternately opened and closed wings, uttering a cheery note of four syllables in each arc of its flight. Other finches from the Canary Isles, called by the name of their ancestral home, are among the best known of our caged singers.

534 Goldfinch, its nest and eggs.

GULLS

Gulls belong to a group of peculiarly long-winged sea birds, built for extraordinary powers of flight. They are sociable creatures, often choosing to live close by busy harbors and river ports where there is much commotion and noise of traffic. They follow vessels hundreds—even thousands—of miles, partly for discarded food, and partly for the pleasure of companionship. These extreme amounts of exercise so toughen their muscles as to make them valueless for human food, but in some parts of the world their eggs are very desirable for eating.

**286 Sea gulls on San Francisco Bay, California.*

HOGS

The swine family of hoofed animals, to which hogs belong, is distinguished by its peculiar development of the nose. A pig's snout is as effective as an extra limb for digging and handling food. All the modern varieties of domesticated pigs are descendants of wild ancestors, the boars that were hunted in ancient and mediæval times. The commercial importance of swine has steadily increased as uses have been found for practically every part of the carcass. A large variety of food can be used in raising this kind of stock, but Indian corn (maize) is one of the best and cheapest, so it naturally comes about that a corn-growing district is likely to be a hog-raising district.

**218 Feeding the hogs on a prairie farm, Illinois.*

HIPPOPOTAMUS

This native of Africa has the special distinction of a marvelously thick and strong hairless hide. On its back and sides tough protective skin develops like armor to the thickness of two inches, though some other parts of its body have a more ordinary weight of hide. Its short, thick legs have four toes, their nails developed into hoofs. Its habit is to spend a large part of the time in the water, where, in spite of its clumsy build, it swims and floats. It is fond of wallowing in mud. Its huge bulk (full-grown males are sometimes 5 feet high and 12 to 14 feet long) is developed and kept in repair on vegetable diet—largely water plants and the herbage of swamps. Certain of the teeth in its lower jaw, used for digging and cutting, grow to exceptionally large size and furnish bone as fine of grain as an elephant's tusks. Some African tribes kill hippopotami with skillfully directed spears, and eat the creatures' flesh raw or smoked.

820 A huge hippopotamus in the Zoo at Bronx Park, N. Y. City.

HORSES

The horse and his nearest relative, the donkey and zebra, are hoofed, but, unlike the other hoofed animals, these have only one toe for each foot. The hoof, with which we are all so familiar, is its enlarged and thickened nail. The space between a horse's front teeth and cheek teeth (so convenient for bits!) is another peculiarity of the species. Wild horses used to be numerous in the steppe or prairie lands of eastern Europe and central Asia, and there is even now a wild species in Tibet; but men in the most ancient times saw helpful possibilities in the strength and speed of horses, and began to tame and train them. The specimens seen in these stereographs are excellent examples of animals broken to the saddle, for carriage service and for heavy teaming.

Draft and Farm Horses

**182 Farm horses in the rice field, Texas.*
**188 A team of draft horses in St. Louis, Mo.*
**189 Draft horses in main street of St. Louis, Mo.*
**200 A fine team of horses on a farm in Michigan.*
**212 A big team of draft horses in Chicago.*
**216 Some fine specimens of horses plowing on the Illinois prairie.*
**225 Faithful old horse employed in a lumber yard in Minneapolis.*
**309 Twenty-six horse team in the harvest fields of Walla Walla, Washington.*
**987 Fine horses in a field in Australia.*

Road and Saddle Horses

26 A pretty road horse in New Hampshire.
84 A little pony and cart in a daisy field.
**194 Indian saddle horses.*
183 A saddle horse in Texas.
235 Six-horse tally-ho at Gardiner, Montana.
**262 An Indian pony on the sandy deserts of Arizona.*
**259 Cowboys in the saddle on the Arizona plains.*
**505 Splendid horses in the coronation procession, London.*
**584 A carriage pony at Bergen, Norway.*
**676 Military horses in Madrid, Spain.*
**830 English military horses in South Africa.*

850 Splendid Arabian horses by the Dead Sea, Palestine.
890 Horses at Darjeeling, India.
**293 U. S. cavalry horses in California.*
**835 English cavalry horses in South Africa.*

KANGAROOS

A very few mother animals are equipped by nature with a sort of pocket (pouch) in the skin, where the young may be carried for a time, somewhat as the women of certain savage tribes carry a baby in the looped folds of a blanket. The kangaroo, a native of Australia, is the largest of all such pouched creatures. Both mother and father kangaroo have their hind legs developed to very much larger size and greater strength than their forelegs. The forelegs seem almost like a poor sort of arms, useful only in climbing or clutching. Kangaroos do not walk nor run, but hop, using both hind legs in the same way at the same moment, and not alternating. A full grown male is often 6 feet tall, and can leap from 10 to 30 feet in a single spring. It lives on vegetable food, mainly leaves, twigs and roots.

984 A boxing kangaroo in the Zoo at Melbourne, Australia.

LLAMAS

See Camels. They belong to the same zoological family, but differ from their Arabian and Bactrian relatives in having no humps, and in being much smaller. They are found only in certain Andean districts of South America, where they perform the work done in other lands by pack-horses and donkeys.

**473 Pack train of llamas – unique Andean beasts of burden, Peru.*
477 Llamas on the road to Arequipa, Peru.

MULES

See Donkeys. The mule is a hybrid, i. e., of mixed ancestry. Its father was a horse, its mother a donkey.

**273 A mule team on the great sand wastes of Arizona.*
**442 The bread-mule in Caracas, Venezuela.*

OSTRICHES

The largest birds now living lack the usual bird-like ability to fly. They make up for it by having extraordinarily developed legs that can stride twenty-five feet and outdistance any horse. Males of the African species are sometimes eight feet tall, and weigh 250 to 300 pounds. The long neck and legs are bare, but the body is covered with feathers, and wings and tail produce the exceptionally long, soft plumes which are so valuable.

Ostriches in a wild state are found in parts of northern and southern Africa, Arabia and Mesopotamia. They are being systematically raised for profit in those countries, also in Australia, Florida, southern California and Mexico. Their eggs are edible.

**283 Ostrich farm in California, showing fine specimens of the birds and their eggs.*

PELICANS

These big, heavy birds belong to the same family as the Gannets. They dive and swim quite as well as they fly. Their legs are short and clumsy—their walk awkward. A full-grown pelican is about four feet long, and his outspread wings measure six feet or more from tip to tip. The bill of a pelican is developed to remarkably great size, and a special pouch or pocket at its base makes it possible for it to carry large quantities of unswallowed food. They dive from mid-air, seizing fish with the beak and pack crops and necks with prey, then fly back to drop the food into the throats of their big, clumsy chicks.

**165 Pelicans protected by Uncle Sam – Pelican Island off coast of Florida.*

REINDEER

See Deer

SEALS AND SEA LIONS

These are not fishes, but animals, with some markedly fish-like characteristics. The fact that they are warm-blooded flesh-eaters and air-breathers, with typically animal-like hides, makes them related more closely to carnivorous animals of amphibious habit than to fishes. On the other hand, their fish-shaped bodies and their small fin-like legs make them curiously different from their four-legged cousins on land.

The so-called "seals" of the California coast are more properly sea lions, a species merely hairy and not actually furry. (Stereograph *287.) True fur-bearers live in waters farther north.

**287 Close view of seals on the beach, Santa Catalina Island, California.*

SHEEP

These are all cud-chewing, hoofed animals belonging to the same large family as cattle and goats, but with some differences in build, and very marked differences in the nature of their hairy pelt. Nobody now knows from what wild stock our numerous domestic breeds of sheep are descended. The edible qualities of the mutton and the length and fineness of wool have been enormously improved by systematic breeding. There are now sheep whose wool-producing skin has been made to increase in area till it lies in big puffs and folds all over the body and from nose to hoofs. Russia, Australia, New Zealand, Argentina and the United States are the largest sheep-raising countries, because they have immense tracts of pasture land good enough for grazing sheep while nearly worthless for any other purpose. Shearing is now usually done by machinery.

**201 Genuine prize-winning Shropshires in a Michigan pasture.*
**483 Sheep in the sunny fields of Peru.*
**831 Sheep grazing on the veldt in South Africa.*
991 Drink for 5,000 thirsty sheep on a big ranch in Australia.

SILK WORMS

The silk worm is one of the forms assumed by an insect called the bombycine moth. It is hatched in this caterpillar guise from an egg laid by the winged moth. The species of most value feeds almost entirely on mulberry leaves. Within its body the food thus secured is transformed into a fluid stuff that "strings" when expelled from the abdomen, forming a very fine, delicate thread of two strands. (The material is given out at the same moment from two openings, as we breathe through two nostrils at once.) Of this fine fibre it makes a cocoon about the size of a pigeon's egg, and pale yellow in color. In the natural course of events, the creature inside the cocoon would in due time undergo a transformation similar to that of our common butterflies, and come out in true insect form with wings; but its cocoon fibre is so valuable that most of the chrysalides are not allowed to live through the full period. Their exit would damage the silk. They are killed by a process which leaves the cocoon fibres uninjured and the silk is then carefully unwound by hand. Threads of such raw silk have been secured 1,000 feet long. It takes about 1,600 cocoons to produce a pound of silk. The creature was originally a native of China, but it is now raised also in various parts of Asia, Europe and the United States.

See also "Silk" under Products and Industries.

**864 Feeding the silk worms their breakfast of mulberry leaves.*
**865 Cocoons as woven in the mulberry branches.*
**866 Deadening the worms in the cocoons by steam.*

SNAKES

Snakes are legless reptiles, air-breathing, but cold-blooded. Their shape and their peculiar mode of locomotion differentiate them from nearly all other creatures. The scales that cover the under side of a snake's body are set at right angles to the extremely flexible spine, and one edge of the scale is free enough and sharp enough to get a "purchase" against

a surface of earth or stone while the elastic muscles of the body push it forward. A snake's teeth are for seizing and holding prey, not for chewing; food is swallowed whole. The tongue is usually long, slender and forked, used chiefly for feeling, like an insect's antennæ. Snakes have no movable eyelids. The epidermis (skin) covering the head is transparent where it covers the eye, forming a sort of window. The whole skin is shed at intervals, a new one being in process of formation under the old and ready for use when the other is cast. All snakes are carnivorous, some eating insects, others frogs, toads, fish and birds. The largest species feed on animals suited to their appetites—goats, deer, etc.

Certain snakes of South America and India are especially famous for their size, their beauty and the deadly effect of their poison fangs. The hooded cobra of India is the most dangerous member of the family. No antidote for its bite is known. (Stereograph 894.)

894 Street showman exhibiting superbly handsome snakes before an admiring crowd, Calcutta, India.

SONG THRUSHES

The thrushes are many. America has several species differing in plumage and in song, and Europe has still others. They are all famous for the wonderfully beautiful musical qualities of their song. English and American poets and bird lovers have many times tried to put into words and into conventional notation the strains that are such a delight to the ear. It has been suggested (Schuyler Matthews) that the overtones which give characteristic charm to our American wood thrush or song thrush may be accounted for by the possession of "extremely short and extremely long vocal cords—the latter vibrated along with the former, thus producing a singular effect of harmony."

The stereographed bird (533) is of an English species.

533 Song thrush setting; male bird by the nest.

SWINE

See Hogs

TIGERS

The tiger resembles so closely our common domestic cat that it gives particularly good material for study of its type—perhaps the perfection of carnivorous creatures. Its strength of structure, its grace of movement and its beauty of contour, texture and color, are all worth studying as features of the highest development which this line of creation has ever reached on our earth. The lion divides this questionable honor with the tiger.

A man-eating tiger (stereograph 896) is exceptional. Most animals of its species live on wild pigs, deer, monkeys and cattle.

The puma, jaguar, ocelot and lynx are the tiger's nearest wild relatives in North America.

896 Famous "man-eater" at Calcutta – devoured 200 men, women and children before capture, India.

WALRUS

The walrus belongs to the same animal family as the seal and the sea lion. It is a warm-blooded creature, but is adapted by nature to living mainly in and by the water, usually in Arctic latitudes. It uses smaller sea creatures for food. A full-grown male is 8 to 10 feet long, and may weigh over a ton. Its body is covered with short brownish hair, and the hide has a thick lining of fat quite similar to the blubber of a whale. It has flapper or fin-shaped legs, very serviceable as paddles, but of limited help in moving over the ground. Two front teeth in its upper jaw grow very long and sharp. It uses them like a mountain-climber's alpenstock when it needs to climb a rock or a mass of ice, and again it uses them like spades and pitchforks when it needs to dig in the sand for

clams. The coasts of Labrador, Greenland, Spitzbergen and Nova Zembla are its favorite home districts.

50 Atlantic walrus with its eyes on a tempting morsel.

WHALES

Whales are warm-blooded, air-breathing, flesh-eating animals, not fishes; but they are specially adapted to life in the water. Their enormous bodies are so shaped as to divide water easily. Their legs are transformed into mere flappers used to help the tail in propelling and steering. Their flesh is swathed in a thick layer of fat, which prevents it from being chilled in Arctic waters, and protected from chance injury by a tough, hairless hide. They live on other sea creatures. It is possible for them to hold their breath under water for an excessively long time—more than an hour, if necessary. Emptying the lungs of moisture-laden air (spouting) gives the effect of a playing fountain.

Two kinds of whales are of marked commercial value. The baleen whale is hunted for its fat (blubber), from which oil is extracted and for peculiar horny growths (whalebone) that curtain the sides of its gigantic, toothless mouth. The sperm whale is hunted for its blubber, for the spermaceti and oil from its head, and for its large teeth which are almost as fine-grained as an elephant's tusks.

**63 Whale on a Long Island beach, New York.*

64 Head of a huge whale on a beach of Long Island.

ZEBRAS

The zebra is closely related to horses and donkeys, but it has almost never been satisfactorily domesticated. Herds of wild zebras are numerous in East Africa, and some natives eat their flesh. They are smaller than our domesticated horses and distinguished by a conspicuously striped hide—black on cream-color. The force of their kick and their speed in running, give them fair protection against human hunters, but great numbers of them are seized and eaten by lions.

810 Zebra, favorite game of man and of lions, East Africa.

ARCHITECTURE

EDITED BY

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358 STEREOGRAPHS OR SLIDES WITH 366 REFERENCES TO THEM.

In no way is the old saying, "Seeing is believing" more strongly emphasized than in the continually increasing use of the lantern slide, the cinematograph or moving picture in all branches of educational work. One very prominent scientist in a recent article on this subject stated as his belief that future generations will be almost, if not entirely, instructed in this manner. The federal government in its work for the Agriculturalist and in its Good Roads department has adopted the film as the most satisfactory way of disseminating the results of the experiments in a number of directions.

Architecture and the allied arts, more than any other educational work, furnish opportunities for the use of such a method that are almost unlimited. In the education of an architect, the training of the eye, and through the eye the mind, forms a most im-

portant element in producing the final result. Unlike the training in those professions that depend largely, if not altogether, on pure reasoning and whose practice is governed by formulas and rules from the application of which all problems can be solved, the architect must train himself to instinctively choose those forms that will, when combined, produce the most harmonious and beautiful whole, not only in mass, detail and line, but utility as well.

This means that a student of the arts must so fill his mind with what has been or is being done under similar conditions in his particular line, that when a problem is presented to him he can from that store of knowledge at once grasp its salient points, and avoiding the faults shown in existing work produce a solution that, while it may suggest other solutions, still is of itself new and original.

To acquire the ability to do this necessitates not so much a training on hard and fast rules as it does a development of all the artistic perceptions, including the senses of beauty, of proportion and of utility.

There is no better means whereby such a development can be advanced than by the inspection and study of the work of others in similar problems. This can be secured in three ways. First, by means of extensive and costly travel which unfortunately few can afford; second, by the study of ordinary

photographic prints, drawings and lantern slides; and, third, far more effectively, as educators are now realizing, by the study of stereographs or binocular photographs.

All actual architectural structures exist in three dimensions or as solids. The great defect of drawings and ordinary photographs is that they show things in only two dimensions. Moreover, because of this lack of the third dimension, drawings and ordinary photographs, through foreshortening and in other ways, give inaccurate and distorted impressions. This is due to the fact that the ordinary photograph is made by a single camera, like a person with one eye (and all drawings are made on the same principle). The stereograph alone is made on the principle of two-eye seeing—that is, with a double camera, with the two lenses set about as far apart as a person's two eyes. Such a camera gives the two different views that our two eyes would get on the spot, and when these two views are properly combined in the stereoscope we see an object or structure standing out the same as we would if we stood where the camera stood before the object or building itself. The ordinary photograph really appears far better than it is. It is very deceptive. What it fails to give, as well as its inaccuracies in what it does give, are far greater than is generally realized. This is brought out in a startling way

when we compare in the stereoscope ordinary photographs and stereographs of the same subject. There can be no question of the great importance of the difference between the two forms of representation. Especially is this true in the study of architecture, where accurate impressions of form are so essential.

Manifestly it would be impossible to cover and exhaust the entire field of architecture in the limited number of subjects that could be included in a collection of this character; therefore, in making the selection the effort has been to have it cover as many types and characteristics as possible, hoping thereby to create an interest that would induce further study.

Moreover, this selection has not been made for the professional student, but rather for the use of those who have a general interest in architecture from a less confined viewpoint than of its practice as a profession. The selection, therefore, is more general in character with comparatively little attention given to whether the details in any particular direction are obtainable or not.

Publishers' Note:

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and also on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations on *Architecture* the teacher is re-

ferred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

EGYPTIAN

THE OLD KINGDOM

*789 The Pyramids of Gizeh, from the road to Cairo.
790 The Great Pyramid of King Khufu at Gizeh.
791 Looking up the corner of the Great Pyramid at Gizeh.
*792 On the summit of the Great Pyramid, Gizeh.
794 Down the passage to Khufu's tomb, Great Pyramid, Gizeh.
*795 Ruins of the Granite Temple, Sphinx, and the Great Pyramid, Gizeh.
793 The second Pyramid with crown of original casing masonry.

THE EMPIRE (18TH DYNASTY)

800 The most beautiful colonnade in Egypt, south across temple court at Luxor, Thebes.

THE EMPIRE (19TH DYNASTY)

804 Abu Simbel Temple, hewn in the native rock, Egypt.

THE PERSIAN PERIOD

802 The Island of Philæ and its temples from Bigeh, Egypt.

GRECIAN

CYCLOPEAN OR EARLY GRECIAN

770 Agamemnon's council hall in Mycenæ, Greece.

CLASSIC GRECIAN

(DORIC)

*764 West end of the Parthenon from the Propylæa.
762 The Parthenon crowning the Acropolis at Athens, Greece.

*765 Northeast over the Parthenon giving closer view of its splendid Doric pillars.
732 Beautiful home of the Vetii, buried 79 A. D., Pompeii, Italy.
745 Greek Theatre, of fifth century, B. C., Syracuse, Sicily.
39 The Sub-Treasury Building, New York City.
141 Lee's old home at Arlington, Va.

(IONIC)

763 Beautiful Temple of Nike, Athens.
*764 The Erechtheum on the Acropolis, Athens.
1 Grecian porch at Bunker Hill, Boston.
*131 U. S. Treasury Building at Washington, D. C. (mainly Grecian).

(CORINTHIAN)

*766 Looking down upon the monument of Lysikrates, Athens.
*767 The beautiful Corinthian pillars of the Olympian temple of Zeus, Athens.
*48 Soldiers' and Sailors' Monument, Riverside Drive, New York City.

ROMAN

725 The Temple of Matuta, with its Corinthian columns, Rome, Italy.
*726 The tomb of Hadrian from St. Peter's, Rome, Italy.
*729 The Coliseum at Rome, Italy.
*728 The ruins of the Forum, S. E. from the Capitol, Rome, Italy.
675 The Old Roman aqueduct, Segovia, Spain.

MODERN ROMAN

*556 Bank of Ireland, Dublin.
*781 Castle overlooking the Bosphorus.
*132 The United States Capitol at Washington, D. C. (Roman Corinthian).

34 The Appellate Court Building, at Madison Square, New York City (Roman Corinthian).
39 The New York City Stock Exchange.
*496 The Roman arches of London Bridge, England.
*537 National Gallery and Royal Institution, Edinburgh, Scotland.
135 Supreme Courtroom in the Capitol at Washington, D. C.
*608 St. Isaac's Cathedral at St. Petersburg, Russia.
*647 Palace of Justice at Brussels, Belgium.
*751 The Franzens Ring, Vienna, Austria.

BYZANTINE

TURKISH

778 St. Sophia and other mosques of Constantinople, Turkey.
779 Interior view of St. Sophia, Constantinople.
847 Dome of Rock and Mosque of El Aksa, Jerusalem.

RUSSIAN

*613 The Kremlin at Moscow.
614 Tower of Ivan and Cathedral of Archangel Michael at the Kremlin, Moscow.
597 Traces of Byzantine influence on Vasagatan Street, Stockholm.

MOORISH

*805, *807 Moorish architecture in Algiers.
*684 The Alhambra Palace at Granada, Spain.
*685 Magnificent Court of the Lions, Alhambra Palace.
34 Madison Square Garden, New York City.
689 The Cathedral at Cadiz, Spain.
693 Lisbon, Portugal (Moorish influence).

MOHAMMEDAN ARCHITECTURE IN EGYPT

*786 Overlooking Cairo.
788 Tombs of Moslem rulers, Egypt.

MOHAMMEDAN ARCHITECTURE IN SYRIA

*857 Straight Street in Damascus.

*858 The Court of a Syrian home, Damascus.

MOHAMMEDAN ARCHITECTURE IN INDIA

902 Juma Musjid Mosque at Delhi, India.

*903 Close view of Juma Musjid Mosque at Delhi, India.

*899 Taj Mahal at Agra, India.

900 Marble screen in the Taj Mahal, India.

MOHAMMEDAN ARCHITECTURE IN MESOPOTAMIA

*881 Domes and minarets of Bagdad.

MODERN BYZANTINE

*45 Government receiving station on Ellis Island, New York Harbor.

BASILICAN

*736, 737 The Cathedral and Baptistry at Florence, Italy.

ROMANESQUE

341 Executive Building at Honolulu, H. I.

*454 Opera House at Rio de Janeiro, Brazil (developed Romanesque).

*573 Royal Palace at Christiania, Norway.

*883 Modified Romanesque Railway Station at Bombay, India.

989 The General Post Office at Sydney, Australia (modern Romanesque).

*561 Royal Avenue, Belfast, Ireland.

901 Great Durbar Hall in the Palace of H. H. the Maharaja of Gwalior, India (developed Romanesque).

677 Bank of Spain in Madrid (developed Romanesque).

GOTHIC

ENGLISH GOTHIC

*38 Trinity Church, New York City.

*502 House of Parliament and Westminster Abbey, London.

503 House of Peers (interior view), London, England.
*512 Interior view of Canterbury Cathedral, showing interlacing arches, London.
*509 Windsor Castle, England.
*529 Solemn length of Cathedral nave, Durham, England.
531 Ruined Furness Abbey, England.
*504 Westminster Abbey in London, England.
511 Tower of Magdalen College at Oxford, England.
*538 Scott Memorial at Edinburgh, Scotland.
539 Holyrood Abbey, Scotland.
*540 Beautiful Melrose Abbey, Scotland.
*554 Cathedral at Queenstown, Ireland.

FRENCH GOTHIC

*659 Notre Dame Cathedral, Paris.
662, *663 The Cathedral at Rheims, France.

GERMAN GOTHIC

*638 Cologne's Cathedral, the most perfect piece of Gothic architecture to be found anywhere.
754 Reception Hall in the Rathhaus at Vienna, Austria.

ITALIAN GOTHIC

*738 Beautiful Gothic Cathedral at Milan, Italy.
739 Among the myriad spires of Milan Cathedral.

VENETIAN GOTHIC

*740 The Doge's Palace at Venice, Italy.
741 The Doge's Palace and Bridge of Sighs, Venice, Italy.
*742 Home of an old merchant of Venice, Italy.

FLAMBOYANT GOTHIC

648 Town Hall at Brussels, Belgium.
*657 Sainte Chappele at Paris.
372 The Government Building at Ottawa, Canada.
497 Tower Bridge in London, England.
41 Fifth Avenue Presbyterian Church, New York City.

(EARLY FLORENTINE)

*736 Palazzo Vecchio, Florence, Italy.

RENAISSANCE

FRENCH RENAISSANCE

*129 State Department at Washington, D. C.
370 Château Frontenac, Quebec, Canada.
*632 Neuschwanstein Castle in the Bavarian Alps, Germany.

LOUIS XVI.

*493 Central Avenue, in Montevideo, Uruguay.
*656 The roof of the Louvre at Paris.
660 The Gallery of Battles at the Royal Palace at Versailles, France.

ITALIAN RENAISSANCE

*130 Congressional Library at Washington, D. C.
136 Interior of the Congressional Library at Washington, D. C.
6 Public Library, Boston.
34 Madison Square Presbyterian Church, N. Y. City.
*598, 599 Royal Palace at Stockholm, Sweden.
*726 St. Peter's Church at Rome, Italy.
727 Interior of the Vatican Library, Rome, Italy.

VENETIAN RENAISSANCE

*40 The New York Herald Building, New York City.
688 Bull Ring at Seville, Spain.

SPANISH RENAISSANCE

*676 Royal Palace at Madrid, Spain.
694 Court and Cloisters of Sao Jeronymo at Balem, Portugal (highly developed Romanesque).

GERMAN RENAISSANCE

*621 Royal Palace, Berlin.
622 Royal Library and Academy of Arts and Sciences, Berlin, Germany.
*625 The Zwinger at Dresden, Germany (developed Renaissance).

*752, 753 Imperial Museum at Vienna, Austria.
*755 Imperial Opera House at Vienna, Austria.

NORMAN

*498 Tower of London, England.
*547 Stirling Castle, Scotland.
535 Mediæval Castle and Fortress, Conway, Wales.

ELIZABETHAN

532 Quaint old houses of Shrewsbury, England.
*517 An old house in Exeter, England.

COLONIAL

*2 The State Capitol Building at Boston, Mass.
*3 Old South Church, Boston.
*4 Faneuil Hall, Boston.
*5 Interior of Faneuil Hall, Boston.
*7 Longfellow's old home at Cambridge, Mass.
8 Lowell's old home in Cambridge, Mass.
26 Webster's old home at Franklin, N. H.
58 The Capitol at Albany, N. Y.
106 Independence Hall, Philadelphia.
*129, *131, *137 White House at Washington, D. C.
142 Christ Church at Alexandria, Va.
*143 The old home of Washington at Mt. Vernon, Va.

SPANISH-AMERICAN

162 Oldest House in the United States—St. Augustine, Fla.
*320 Columbus Square from San Cristobal Fortress, San Juan, Porto Rico.
322 Columbus Square, San Juan, Porto Rico.
328 The Cathedral in Panama City.
413 Over Guanajuato, Mexico.
*398 The Great Cathedral, Mexico City.
*400 Chapultepec Castle, Mexico City.

449 Fine residence in Barranquilla, Colombia, South America.
*421 The Plaza at Havana, Cuba.
*428 Courtyard of a typical Cuban home.

SKYSCRAPERS

*30 Towering temples of trade on lower Manhattan Island, N. Y.
*31 Great skyscrapers of Manhattan from Brooklyn Bridge, New York City.
34 From Flatiron Building, N. E. past Madison Square, New York City.
35 Lower Manhattan, from Metropolitan Tower, New York City.
36 Singer Building (47 stories) and City Investing Building (13 acres floor space), New York City.
37 Woolworth Building, tallest in the world.
*38 Wall Street, New York City.
39 Looking up Broad Street past Hanover National Bank Building, New York City.
*40 Herald Square, north to the Times Building, New York City.
41 Fifth Avenue, north to the Netherlands Hotel, New York City.
*43 Steel construction of the Singer Building, New York City.
*189 Street scene in St. Louis, Mo.
*212 State Street, Chicago, Ill.
*284 Steel tower of the City Hall after the earthquake, San Francisco, Cal.
*654 Eiffel Tower, Paris.

ARCHITECTURE OF OTHER COUNTRIES

DUTCH

*639 Overlooking a portion of Amsterdam, Holland.
*640 Old Weigh House and Zuider Kerk, Amsterdam.

AZTECS OF MEXICO

410 Hall of Mosaics, marvelous relic of prehistoric builders—ruins of Mitla, Mexico.

SWISS

697 Laufen Castle, at the Falls of the Rhine, Switzerland.
*704 The principal street in Berne, Switzerland.

HINDU

*884 Armitsar's Golden Temple, India.
898 Benares, religious center of India.
*906 Modern Madras.

BURMESE

909 Towering images of Buddha, Pegu, Burma.
*910 Pagodas at Mandalay, Burma.
911 Gilded shrine at Mandalay, Burma.

CHINESE

*931 Nanking Road, Shanghai, China.
937 Wall of China.
940 The Palaces of the Forbidden City, Peking.
941 The Sacred Gate, Peking, China.
942 Great Porcelain Tower at the Imperial Summer Palace, Peking.
*943 In Imperial home, Peking.

JAPANESE

959 Overlooking Tokyo, Japan.
*960 A street in Tokyo, Japan.
*962 Interior of home of Count Okuma, Tokyo
*966 An old pagoda at Kyoto, Japan.

BABYLONIAN

873 Ruins of Nebuchadnezzar's Palace.

SPECIAL GROUPS OF BUILDINGS

PRIMITIVE ARCHITECTURE

*186 Lincoln's birthplace at Hodgensville, Ky.
*261 Mesa village of Hopi Indians, Arizona.

*262 Homes of the Navajo Indians, Arizona.
*316 Indian huts in Kasaan, Alaska.
*325 Aguadilla, Porto Rico.
329 Native life in interior Panama.
*348 A house in Tutuila, Samoan Islands.
*356 Primitive house in the Philippine Islands.
*357 Primitive homes in Luzon, P. I.
360 A street in Cebu, P. I.
*395 Summer tents of the Esquimaux, Greenland.
*412 Primitive houses in Mexico.
*458, *459 Primitive houses in Ecuador.
575 Log house in the Maan Valley, Norway.
581 A humble mountain house in Norway.
*592 Log cabin home in the Vidde Valley, Norway.
*593 People of the frigid north, Norway.
*816 Wachagga village, East Africa.

COTTAGES

*56 Washington's headquarters at Newburgh, N. Y.
515 The quaint cottage homes of Shanklin, Isle of Wight.
*525 Interior of Shakespeare's house, Stratford-on-Avon.
*526 Anne Hathaway's cottage at Shottery, England.
530 Dove Cottage, Wordsworth's home at Grasmere, England.
*546 Burns' cottage at Ayr.
*569 Cottage home in Ireland.
*594 Cottage in Norway with roof of hewn logs.
*618 A characteristic country house in the heart of Russia.
*645 Dutch cottages at Goes.
*669 Breton village home at Crach.
706 A country road in Switzerland.
*707 Youthful years and maiden beauty in Switzerland.
*771 Adobe huts in Sparta, Greece.
*990 Cottage in Australia.

CASTLES AND PALACES

*400 Chapultepec Castle, Mexico.
*423 Morro Castle, Santiago, Cuba.

*498 Tower of London.
*509 Windsor Castle, England.
*537 Edinburgh Castle, Scotland.
539 Holyrood Palace, Edinburgh, Scotland.
541 Tantallon Castle, N. Berwick, Scotland.
*547 Stirling Castle, Scotland.
*573 Royal Palace, Christiania, Norway.
*598, 599 Royal Palace, Stockholm, Sweden.
610 Imperial Palace of Peterhof, Russia.
*613 The Kremlin at Moscow.
614 Tower of Ivan in the Kremlin.
*621 Royal Palace, Berlin.
*632 Neuschwanstein, Germany.
*635 Ehrenfels Castle on the Rhine.
637 Ehrenbreitstein Fortress on the Rhine.
660 Gallery of Battles at Versailles, France.
673 Ducal Palace of Monaco.
*684, *685 Alhambra Palace, Granada, Spain.
693 Castle of St. George at Lisbon.
697 Laufen Castle at the Falls of the Rhine.
*740, 741 Royal and Doge's palaces in Venice.
*761 Royal Palace at Athens.
*781 Battlement on the Bosphorus.
901 Durbar Hall in India.

CATHEDRALS AND CHURCHES

*3 Old South Church, Boston.
*38 Trinity Church, New York City.
142 Church at Alexandria, Va.
*398 The Great Cathedral of Mexico City.
453 Cathedral at Rio de Janeiro, Brazil.
462 La Campania Church (interior) Quito, Ecuador.
*494 Cathedral and Public Square, Montevideo.
*504 Westminster in London.
*512 Choir at Canterbury to the Corona, England.
*529 Cathedral nave at Durham, England.

*540 Ruins of beautiful Melrose Abbey, Scotland.
*554 Queenstown Cathedral, Ireland.
*596 Ridarholms from the heights above Stockholm.
*608 St. Isaac's Cathedral, St. Petersburg, Russia.
*638 Cologne Cathedral, Germany.
641 Church at Delftshaven, Holland.
*656, *659 Notre Dame, Paris.
662, *663 Rheims Cathedral, France.
689 Cadiz Cathedral, Spain.
*736, 737 Cathedral at Florence, Italy.
*738, 739 Cathedral at Milan, Italy.
*751 Cathedral at Vienna, Austria.

GOVERNMENT BUILDINGS

*2 The Capitol of Massachusetts at Boston.
39 The Old Federal Building on Wall Street, New York City.
58 The Capitol at Albany, New York.
*129, *130 Government Buildings at Washington, D. C.
*132 The Capitol at Washington, D. C.
*131 The Post Office Building at Washington, D. C.
341 The Government Building in Honolulu, H. I.
372 The Government Building at Ottawa, Canada.
*488 Government Building and Plaza, Buenos Ayres.
*502, 503 Houses of Parliament.
*556 Bank of Ireland—the old Irish Parliament Building, Dublin.
*647 Palace of Justice in Brussels.
648 Town Hall, Brussels.
*657 Palace of Justice, Paris.
673 Ducal Palace of Monaco.
*684, *685 Alhambra Palace at Granada, Spain.
*752 Imperial Museums in Vienna, Austria.
754 Reception Hall of the Rathhaus at Vienna.
*755 Imperial Opera House in Vienna.
989 Post Office at Sydney, Australia.

BRIDGES

See the list of Bridges under the head of Transportation, also the one under the head of Civic Betterment.

MONUMENTS

See the list under the head of Civic Betterment.

PIER CONSTRUCTION

See Nos. *31, *33, *233, *649, *687.

MISCELLANEOUS

See also *42, *78, 82, 235, *236, 256, *321, 322, *330, *342, *351, 354, *363, *605, 610, *638, *655, 673, 678, *698, 725, 750, *830, 839, 856, 892, *983.

SOME OF THE WORLD'S HIGHEST STRUCTURES

Arranged According to Height

*654 Eiffel Tower (984 feet), Paris.
37 The Woolworth Building (800 feet—920 feet from foundation), New York City.
34, 35 The Metropolitan Tower (700¼ feet), New York City.
36 The Singer Building (612), New York City.
*128 Washington Monument (555 feet), Washington, D. C.
*638 Cologne Cathedral (511 feet), Cologne, Germany.
36 The City Investing Building (500 feet), New York City.
*789, 790 The Great Pyramid of Cheops (451 feet), Egypt.
793 The Second Pyramid (447½ feet), Egypt.
725, *726 St. Peter's Church Dome (435 feet), Rome.
*40 Times Building (420 feet), New York City.
*647 The Palace of Justice (400 feet), Brussels, Belgium.
648 The Town Hall (370 feet), Brussels, Belgium.
*501 St. Paul's Cathedral Dome (364 feet), London.
*542 The Great Forth Bridge (360 feet), Scotland.

*738, 739 Central spire, Milan Cathedral (355 feet), Milan, Italy.

*736, 737 The Florence Cathedral Dome (352 feet), Florence, Italy.

*502 Tower on House of Parliament (340 feet), London.

614 Tower of Ivan. The Kremlin (325 feet), Moscow, Russia.

*740 The Old Campanile (322 feet), Venice, Italy.

913 Butment of Bridge over Gokteik Gorge (320 feet), Burma.

*29 The Statue of Liberty (306 feet), New York Harbor.

34 Tower on Madison Square Garden (300 feet), New York City.

737 Giotto's Tower (292 feet), Florence, Italy.

*132 Dome U. S. Capitol (288 feet), Washington, D. C.

*38 Trinity Church spire (285 feet), New York City (for many years the highest point of the N. Y. sky-line).

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

BIOGRAPHY

BY

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804 STEREOGRAPHS OR SLIDES WITH 4,454 REFERENCES TO THEM

Biography, as the etymology of the word indicates (from the Greek *bios*—life, and *graphein*—write), means the written history of the lives of individual persons, as distinguished from the history of large groups of persons, or nations. It is the "history of particular men's lives" (Dryden). Some historians have seen in general history nothing but the biographies of great men. This is a one-sided conception of history; and in recent times more attention is rightly paid to the masses, to "the common man." On the other hand, it would be equally one-sided to underestimate the importance of great men, of the leaders of the masses. They have often created momentous movements, or at least have shaped and turned into particular channels the prevailing tendencies and currents of the

time. The great epochs of history coincide with the activity, the leadership, of certain great men.

There can be little doubt concerning the educational value of the study of biography. Men as individuals and nations are hero-worshippers. They point with pride to the men and women who have done much and dared much for their country and their fellowmen. Their names are household words, and their example is held up for the veneration and the imitation of the young. The world is moved more by ideals than by ideas, *i. e.*, more by the visible manifestations and concrete embodiments of noble ideas, than by abstract principles. Youth, in particular, is more powerfully influenced by example than by precept, and at the same time possesses an instinctive interest in the lives of great men and women. It is evident that this natural instinct should be utilized for the intellectual and moral formation of youth.

Not all so-called great men, however, are ideals; not all famous men are great men. Some have become famous through gigantic crimes rather than through work which advanced progress and benefited mankind. Not a few of those listed here are only partial heroes, and others may not appeal to our sympathies, yet as they exercised a powerful influence on history, their names and lives deserve

to be known. If teachers think they ought to pass judgment on the character and moral worth of famous persons, they must always do this in a spirit of caution and fairness. A broad-minded and tactful teacher will avoid whatever might reasonably offend the racial or religious sensibilities of pupils. From an educational point of view it is far more important to dwell on the lives of men who were truly great, heroes in the moral order, than of such as must be held up for reprobation. The tendency, found in all ages, to emphasize evil and describe it at length, should find no place in historical and biographical studies, although what is defective and morally wrong must be indicated with prudence and moderation. In the education of children more than anywhere else we must beware lest

> We know the single sinner well
> And not the nine and ninety good.
> —*Whittier.*

Children need inspiration, and the lives of great men and women furnish powerful object lessons of beautiful sentiments, of lofty principles and of noble deeds.

For a long time historical writings were almost purely political, and the biographies studied were mainly those of rulers, statesmen and military lead-

ers. We now rightly insist that there should be room in history not merely for the warrior, king and statesman, but also for the missionary, the discoverer and explorer, the poet, the artist, the orator, the inventor, the scientist, the philosopher, the pioneer in industry and commerce. Common experience and special experiments have proved that younger pupils, especially boys, are particularly interested in the brilliant lives of rulers, in the stirring careers of great soldiers and the adventures of explorers. They should gradually be made familiar with the lives, and appreciate the achievements, of men who advanced civilization along the lines of literature, science, etc. They should be taught that there are heroes not only on the battlefields but also in peaceful pursuits.

Biography is not to be taught, ordinarily, as a separate branch, but rather incidentally, in connection with other subjects, especially literature, history, art, science. It can be utilized to create and maintain interest in every kind of school work. If one is genuinely interested in any branch of study or any kind of work, he will naturally desire to become acquainted with the masters in that field. On the other hand, if natural and instinctive interest should be lacking at first, one of the best means to rouse it is to make the pupils familiar with the lives

and achievements of the foremost promoters and the most distinguished representatives in that particular field of learning.

Geography explains many important events in history, as migrations of nations, divisions of countries, protracted struggles between various states, etc. Similarly it often throws light on the lives of famous historical characters. The name of many a celebrated person at once recalls a certain locality, the place of birth or the scene of some great event in that life. Thus the following are immediately associated in the mind: Shakespeare and Stratford-on-Avon, Cæsar and Rome, Leonidas and Thermopylæ, Constantine and Constantinople, St. Patrick and Ireland, Dante and Florence, Joan of Arc and Orleans, Calvin and Geneva, Marquette and the Mississippi, Washington and Mount Vernon (or the Delaware), Napoleon and Moscow (or the pyramids, or St. Helena), Dewey and Manila. Teachers know the importance of the association of ideas—here association by contiguity, *i. e.*, being perceived together. It is but natural that this close association should be utilized to deepen the mental impressions and, above all, to combine and coördinate the knowledge acquired in separate fields of study.

From these considerations it will be clear that

considerable profit can be derived from the proper use of the stereographs (or slides). Sometimes, in studying geography, the biological material can be added, by asking questions like the following: What great men lived in this country? What famous name is associated with this river? What poet was born (or died) in this city? Traveling through these places a hundred years ago, what distinguished person might you have met? At other times the biographies may be studied as they are listed here. Occasionally, with more advanced pupils especially, it will be useful to study them according to different classes and categories, *e. g.:* The great generals of the revolution and where I met them. Listening to the great orators of the world. Where I could have walked with famous poets, etc. (See at end of list.) Such a classification will help the students to acquire a more thorough and more systematic knowledge.

Publishers' Note:

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations for *Biography*, the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

AMERICA

Although the history of America, of the "New World," extends over only a few centuries, it abounds in stirring events and famous characters. The lives of the discoverers and explorers, of the early settlers, and of the heroes of the Revolution possess a unique interest and present most thrilling scenes which will appeal with particular force to the imagination of the young.

Columbus, Christopher,—Discoverer of America (1446-1506)—See Italy.

Vespucci, Amerigo,—Explorer (1452-1512)—See Italy.

Ponce de Leon,—Governor of Porto Rico, Discoverer of Florida, Explorer and Adventurer (1460-1521)—See Spain.

Magellan, Fernando de,—Sailor and Discoverer (1480-1521)—See Portugal.

Cortez, Fernando,—Conqueror of Mexico (1485-1547)—See Spain.

Cartier, Jacques,—Explorer (1494-1557)—See France.

De Soto, Ferdinand,—Governor of Cuba, Soldier and Conqueror (1501-1542)—See Spain.

Ribaut, Jean,—Explorer (1520-1565)—See France.

Frobisher, Sir Martin,—Sailor and Explorer (1535-1594)—See England.

Drake, Sir Francis,—Sailor, Soldier, Courtier and Discoverer (1545-1595)—See England.

Raleigh, Sir Walter,—Courtier, Explorer and Colonizer (1552-1618)—See England.

Champlain, Samuel de,—Explorer (1570-1635)—See France.

Hudson, Henry,—Sailor and Explorer (died 1611)—See England.

THE UNITED STATES

It is a patriotic duty to take a special interest in our own country, and, without despising other nations, love its institutions and rejoice over the wonderful opportunities it offers to all. Children should be taught to look with grateful reverence to the heroes who established its independence and shaped its liberties and laws. Among the famous men of our country there are some who stand in the front rank of the great men of history, who were truly noble characters and, by their genuine democratic spirit, proved the truth of the saying that "the only true American nobility is found in character." The Revolutionary period, naturally, has a particular attraction for the young. If any part of historical teaching should be largely biographical it is this, the heroic age of our republic. Beautiful lessons of patriotism can be taught by placing before students the noble lives, the sacrifices and the enthusiasm of the great men of that age. The heroes of the Civil War, as well as the men who laid the foundation of the country's political power among the nations, and of her industrial and commercial greatness, the promoters of education, art and literature, deserve to be known by all. At times it may be advisable to compare, with prudence and fairness, our great statesmen and military leaders with those of other

nations. In some points American biography will prove to be unique: in the truly democratic spirit of the country's heroes, and in the number of men of various races and nationalities, who rose from humble conditions to positions of supreme power and influence.

A practical suggestion would be to use the biographical list and the corresponding stereographs or slides on or before state and national holidays. This would furnish an interesting and instructive study and, at the same time, a splendid object lesson in patriotism.

Miles Standish, Pilgrim Father immortalized by Longfellow (1584-1656).

641 Church at Delftshaven, Holland, where Pilgrims prayed before embarking for America.

12, 14 Scenes along the Massachusetts coast.

John Winthrop, Governor of Massachusetts (1588-1649).

1 to 6 (4 are starred) Boston, where Winthrop served as Governor.

John Endicott, Governor of Massachusetts (1589-1665).

1 Charlestown, founded by Endicott.

*2 to 6 (4 are starred) Boston, where Endicott served as Governor.

Peter Stuyvesant, last Dutch Governor of New York (1602-1682).

*639 to *646 (6 are starred) Scenes in Stuyvesant's native country, Holland.

*29 to *33 Scenes in modern lower Manhattan where Stuyvesant ruled his colony.

35 Overlooking (at the left) the farm where Stuyvesant lived and died.

37, *38, 39, *42 Scenes in lower Manhattan at present.

Father Marquette, Jesuit Missionary and explorer (1637-1675)—See France.

William Penn, Quaker founder of Philadelphia (1644-1718).

106 In Philadelphia, the city of Brotherly Love.

*108 Delaware Water Gap on the line between Penn's Woods and Berkeley's Domain.

Capt. Wm. Kidd, noted pirate (hanged 1701). See Scotland.

Benjamin Franklin, Revolutionary statesman, diplomat and philosopher (1706-1790).

106 Old Independence Hall in Philadelphia.

1 to 8 (5 are starred) Boston, the native city of Franklin.

53, *60, *78, 144 Some modern results of Franklin's early efforts in electricity.

*653 to *659 (6 are starred) Scenes in Paris where Franklin served as Ambassador of the United States.

58 Albany, New York, where he proposed and had adopted the "Albany Plan."

Louis Jos. Montcalm, French officer in command at Quebec (1712-1759)—See France.

Samuel Adams, Revolutionary statesman and signer of the Declaration (1722-1803).

106 Old Independence Hall, where Adams signed the Declaration of Independence.

*2 The Capitol at Boston.

*3, *4, *5 Scenes in Boston where Adams served as Governor of Massachusetts.

Col. Wm. Prescott, Revolutionary patriot and hero of Bunker Hill (1726-1795).

1 Bunker Hill, at the battle of which Prescott was in command.

*364, *365 Scenes in Nova Scotia to which Prescott led an expedition to disperse the Acadians.

Gen. James Wolfe, British officer in command at Quebec (1727-1759)—See England.

George Washington, First President of United States and Father of his Country (1732-1799).

*143 Washington's home at Mount Vernon, Virginia.

142 Christ Church at Alexandria, Va., where Washington worshipped.

*128 Washington monument and the Potomac River, D. C.

*129 to *137 (6 are starred) Scenes in the Capital City named after Washington.

*119, *127 In western Pennsylvania to which Washington was sent by Dinwiddie.

*29 to 35 (5 are starred) New York City and surrounding waters were traversed many times by Washington and his army.

*38, 39 The Sub-Treasury Bldg., N. Y. City—the Capitol of the United States during Washington's Presidency.

*48 Looking north toward heights once occupied by Washington and his army.

*80 Palisades and west shore of Hudson—familiar to Washington.

*56 Washington's headquarters at Newburgh, N. Y.

*54, 55 West Point and the Hudson River.

*108 The Delaware River some miles north of the point crossed by Washington.

*7 Washington's headquarters at Cambridge, Mass.

8 Lowell's old home at Cambridge, not far from Washington's headquarters.

*4, 5 Faneuil Hall, Boston.

*2 The Commons and Beacon Hill, Boston.

*3 Washington Street and old South Church, Boston.

1 Bunker Hill, Boston.

Paul Revere, Revolutionary Patriot immortalized by Longfellow (1735-1818).

*3, *4, *5 Scenes in Boston, Mass., whence Paul Revere made his famous ride to Lexington.

9 The battlefield at Concord, Mass.

*38 A modern view of the center of old New York to which Revere was sent by the Sons of Liberty.

106 Old Independence Hall, Philadelphia, to which Revere brought a message.

John Adams, signer of Declaration and second President of United States (1735-1826).

*7, 8 Scenes near Adams' Alma Mater—Harvard, Cambridge, Mass.

1 to *5 (4 are starred) Boston, where Adams practised law.

106 Independence Hall, Philadelphia, where Adams secured the Declaration and was one of the signers.

*653 to *659 (6 are starred) Scenes in Paris where Adams served as Commissioner.

*495 to 503 (5 are starred) Scenes in London where Adams served as Minister.

*38, 39 The Government Bldg. in New York City where he was President.

Richard Montgomery. Revolutionary General (1736-1775).

*555, *556, *557 Scenes near the birthplace of Gen. Montgomery.

*371 Montreal, Canada, against which Montgomery led an expedition.

*369, 370 Quebec, Canada, attacked by Montgomery.

Benedict Arnold, Revolutionary General and traitor (1741-1801).

106 Independence Hall, Philadelphia, where Arnold was once Commander.

*54, 55 West Point, which Arnold planned to surrender to the British.

*495 to 503 (5 are starred) Scenes in London, where Arnold spent his last days.

General Joseph Warren, hero of Bunker Hill and first great martyr of American Revolution (1741-1775).

*3 to 6 (3 are starred) Scenes in Boston, the city of Warren's birth.

*7, 8 In Cambridge, near his Alma Mater.

9 Concord battleground, where Warren fought.

1 Bunker Hill, where Warren fell.

Thos. Jefferson, writer of the Declaration of Independence and third President of the United States (1743-1826).

106 Independence Hall, where Jefferson signed the Declaration of Independence.

*38, 39 The Government Bldg., corner of Wall and Nassau Streets, New York City, where Jefferson served as Vice-President.

*128 to *138 (8 are starred) Scenes in Washington, where he served as President.

*173 to 183 (7 are starred) *187 to *193 (5 are starred) 224 to *243 (7 are starred), and *301 to *315 (12 are starred) Scenes in the Louisiana Purchase of Jefferson's administration.

John Marshall, Chief Justice of the United States (1755-1835).

*38, 39, *40 Modern views of New York City, where Marshall served as Congressman.

*138 A Presidential family such as Marshall was once member of.

133 A chief justice administering the oath of office to a President.

135 The present Assembly Room of the Supreme Court.

*128 to *132, *134, *137 Other Washington scenes.

*653 to *659 (6 are starred) Scenes in Paris to which Marshall was sent as Envoy.

Marquis Lafayette, distinguished French officer, friend of Geo. Washington and American Independence (1757-1834)—See France.

Alexander Hamilton, Revolutionary statesman and first Secretary of the Treasury (1757-1804).

*29 to 41 (7 are starred) Scenes in New York City, the home city of Hamilton.

*129, *131, *132, *137, *138, 139, 140 Scenes in Washington of interest to the study of Hamilton.

*48 Looking across the Hudson from a point nearly opposite Weehawken, where Hamilton was shot.

81 Bergen Hill—on this same ridge, less than 5 miles north, Burr shot Hamilton.

*80 The Palisades of the Hudson River. A few miles south from here Burr shot Hamilton.

Robert Fulton, inventor of the steamboat (1765-1815).

*656, *657 The Seine River at Paris, where Fulton made an unsuccessful attempt with a steamboat.

*29, *30, *48, *54, *57 Scenes along the Hudson River, where Fulton ran the Clermont and other steamboats successfully.

*29, *33, *38, 39, *42 Modern scenes in New York City, where Fulton lived and died.

John Quincy Adams, sixth President of United States (1767-1848).

*7, 8 In Cambridge, Mass., where Adams spent some time as student and later as teacher.

*639, *640 In Amsterdam, where Adams served his country as Ambassador.

*607 to 612 (3 are starred) In and around St. Petersburg, Russia, where Adams served as Ambassador.

*495 to 503 (5 are starred) In London, England, where Adams served as Ambassador.

*128 to *138 (8 are starred) Washington, D. C., where Adams served as Congressman and also as President.

Henry Clay, statesman and orator (the great pacificator), 1777-1852.

*132 The Capitol, in which Clay served as Senator from Kentucky.

*138 The Cabinet Room, where Clay served as Secretary of State.

*128 to *131 and *134 to *137 (2 are starred) Scenes in Washington, D. C.

John James Audubon, naturalist and author (1780-1851).

*173, *174, 175 In New Orleans, La., near where Audubon was born.

185 In Louisville, Ky., where he once was in business.

*29 to 44 (10 are starred) In New York City, where he later lived and died.

John C. Calhoun, statesman, diplomat and orator (1782-1850).

*134 The House of Representatives at Washington, where Calhoun served from South Carolina.

*132 The Capitol at Washington, in which much of Calhoun's best work was done.

*138 The Cabinet Room in which Calhoun served as Secretary of the Treasury and later as Secretary of State.

*128 to *131 and *137, 140 Other Washington scenes.

176 to 183 (5 are starred) Scenes in Texas, which was secured largely through Calhoun's efforts.

Daniel Webster, statesman and orator (1782-1852).

26 Webster's old home at Franklin, N. H.

*129 Overlooking Lafayette Square in Washington, D. C., upon which Webster lived.

1 Bunker Hill monument in Boston.

*4, *5 Faneuil Hall, in which he often spoke.

*132 The Capitol in which he served, Washington, D. C.

*134 In the House of Representatives, where he served from New Hampshire.

*138 The Cabinet Room, where Webster served as Secretary of State.

*130, *131 Scenes in Washington associated with Webster.

Washington Irving, American author (1783-1859)

*30 to *42 (7 are starred) Modern scenes in New York

City, where Irving lived, and which he helped to make famous.

53, *80 Looking north up the Hudson toward Tarrytown and Sleepy Hollow and the land of Rip Van Winkle.

*676, 677 Madrid, where Irving served the United States.

*495 to 503 (5 are starred) London, where Irving served the United States.

*684, *685 The Alhambra, of which he wrote so enchantingly.

Gen. Winfield Scott, distinguished soldier (1786-1866).

*77 On Niagara's banks not far from Queenstown Heights, where Scott distinguished himself.

*153 Charlestown, S. C., where Scott was sent to quell rebellion.

*400 Chapultepec Castle—battle fought by Scott.

*398, *414 In Mexico City, taken by Scott.

*54, 55 West Point, New York, where Scott died.

Peter Cooper, noted philanthropist (1791-1883).

35 From the tower of Metropolitan Bldg., over Cooper Union (at extreme left) to Brooklyn Bridge.

*29 to *44 (10 are starred) Other scenes in New York City.

Commodore Matthew Calbraith Perry, U. S. Naval Officer, who opened Japan to the outside world (1794-1858).

954 East over Mississippi Bay, Japan, where Perry came in 1853 and opened Japan to the world.

Wm. Cullen Bryant, poet (1794-1878).

*29 to *43 (9 are starred) Scenes in New York City, where Bryant was editor of the New York *Evening Post* (not far from where the Singer Bldg. now stands).

George Bancroft, historian (1800-1891).

*7, 8 In Cambridge, Mass., where Bancroft attended Harvard.

1 to 6 (4 are starred) Boston, where he at one time was a prominent figure.

*496 to *507 (8 are starred) Scenes in London, where he served as U. S. Minister.

*621, 622, 623 Scenes in Berlin, where he served as U. S. Minister to Germany.

*138 The Cabinet Room in Washington, where he served as Secretary of the Navy.

139 The officers of the Navy, which he did so much to educate.

*48, 145 Battleships of the United States Navy.

*129 The Navy Department Bldg. in Washington, D. C.

*128, *130 to *137 (5 are starred) Other scenes in Washington.

Brigham Young, early leader of the Mormon Church and founder of Salt Lake City (1801-1877).

256 Salt Lake City, which he and his followers founded and still control.

William Henry Seward, statesman and diplomat (1801-1872).

58 The Capitol at Albany, where Seward served as Governor of New York.

*130, *131, *132 The United States Capitol at Washington, where he served as Senator from New York.

*138 The Cabinet Room in Washington, where he served as Secretary of State under Lincoln.

*128, *129, *131, *134 to *137 (2 are starred) Other scenes in Washington.

141, 142 Virginian soil just across the river, which he saw occupied by the Southern Army.

David Glasgow Farragut, celebrated American Admiral (1801-1870).

145 Hampton Roads, from which Farragut sailed on February 2, 1862.

*173, *174, 175 New Orleans taken by Farragut on April 25, 1862.

*132 Naval officers in Washington of the same rank as Farragut.

153 The kind of fort that Farragut knew.
*48, 145, 332 Some more modern types of forts and battleships.

Ralph Waldo Emerson, poet and philosopher (1803-1882).
1 to 6 (4 are starred) Boston, Emerson's native city.
*7, 8 In Cambridge, Mass., where he was educated.
9 Concord, Mass., where he lived at the time of his death.

Nathaniel Hawthorne, celebrated American novelist (1804-1864).
1 to 8 (5 are starred) Boston, where Hawthorne once served in the U. S. Custom House.
9 North Bridge at Concord, where Hawthorne lived.

William Lloyd Garrison, noted abolitionist (1805-1879).
1 to 8 (5 are starred) Scenes in Boston, where he lived and where he was mobbed.
160 Southern negroes for whose rights Garrison spent his life.
*29 to *42 (8 are starred) Scenes in New York City, where Garrison died.

Gen. Robert E. Lee, Commander of the Confederate Army, gentleman and scholar (1807-1870).
141 Lee's old home at Arlington, Va.
*54, 55 West Point, where Lee was graduated and where he commanded.
*107 Gettysburg, where Lee was defeated by Meade.
*128 to 139 (8 are starred) Scenes in Washington, D. C., just across the river from Lee's home.
142 Alexandria, Va., near Lee's home.

Henry W. Longfellow, poet and educator (1807-1882).
*7 Longfellow's home at Cambridge, Mass.
8 Home of Lowell at Cambridge, Mass.
14 Reef of "Norman's Woe"—scene of the "Wreck of the Hesperus."
*365 Grand Pre, Nova Scotia, the land of Evangeline.

1 to 6 (4 are starred) Scenes in Boston familiar to Longfellow.

9 Battlefield of Concord.

John Greenleaf Whittier, Quaker poet (1807-1892).

*2 The State House at Boston, where he served as a legislator.

1, *3 to 8 (4 are starred) Other scenes in and near Boston.

106 In Philadelphia, where he edited the Pennsylvania *Freeman.*

Abraham Lincoln, President of the United States and emancipator of the slaves (1809-1865).

*186 Birthplace of Lincoln at Hodgensville, Ky.

*134 The House of Representatives, where Lincoln served as Representative from Illinois.

*129, 137 The White House, occupied by Lincoln while President.

*138 A president and his official family in the Cabinet Room.

133 An inauguration of a president at Washington, D. C.

*131 Pennsylvania Ave., where Lincoln was to have received the victorious army of Grant, Sherman and Meade.

*130, *132, 135, 139 Other scenes in Washington.

141, 142 Virginia soil, where the Confederate Army assembled within sight of Lincoln in Washington.

*128 Potomac River, dividing Northern and Southern armies.

*153 Fort Sumter, where the Civil War began.

*107 Gettysburg battlefield, where Lincoln made his famous address.

*29 to *44 (10 are starred) Scenes in New York City through which Lincoln passed on his way to Washington.

*212 State St., Chicago, where he was a prominent figure.

Edgar Allan Poe, poet (1809-1849).

1 to 8 (5 are starred) Scenes in Boston, where Poe was born and grew up.

*427 The U. S. Army in the Philippines (Poe once enlisted as a private).

*54, 55 West Point Military Academy, to which he was appointed and dismissed.

106 In Philadelphia, where he edited a magazine.

*29 to *44 (10 are starred) Scenes in New York, where he was assistant on "Willis's Mirror."

Oliver Wendell Holmes, physician and poet (1809-1894).

*7, 8 Scenes in Cambridge, Mass., where he was born and where he taught.

1 to 6 (4 are starred) Scenes in Boston.

9 North Bridge at Concord, Mass.

Horace Greeley, noted journalist, author and politician (1811-1872).

*32 Scene from World Bldg., New York City, immediately south of which is the Tribune Bldg.

*29 to *48 (13 are starred) Other scenes in New York City, where Greeley lived and worked.

*130, *131, *132, *134 The United States Capitol and House of Representatives, where Greeley served as Congressman from New York.

*128, *129, 133 and 135 to 139 (2 are starred) Other scenes in Washington, D. C.

Wendell Phillips, orator and abolitionist agitator (1811-1884).

*4, *5 Faneuil Hall, in which Phillips made some of his greatest speeches.

1, *2, *3, 6, *7, 8 Scenes associated with Phillips, around Boston.

Charles Sumner, reformer, orator and legislator (1811-1874).

1 to 6 (4 are starred) Scenes in Boston, where Sumner was born and lived.

*7, 8 In Cambridge, Mass., where he was graduated from Harvard.

*128 to 139 (8 are starred) Scenes in Washington, where he served as Senator from Massachusetts.

John C. Fremont, noted explorer, general and statesman (1813-1890).

*159 The wharves at Savannah, Georgia, the native city of Fremont.

*29 to *43 (9 are starred) Scenes in New York City, where he lived and died.

*132 The U. S. Capitol at Washington, D. C., where he served as Senator from California.

*257 to *278 (16 are starred) Scenes in Arizona, which state he explored and of which he was Governor.

*279 to *315 (28 are starred) The Pacific Coast States, which he explored and did so much to open up.

Gen. George Gordon Meade, Commander of Federal forces at Battle of Gettysburg (1815-1872).

689, 690 Cadiz, Spain, the native city of Gen. Meade.

*107 The battlefield of Gettysburg, where Meade defeated Lee.

Benjamin Franklin Butler, distinguished lawyer, legislator and soldier (1818-1893).

*128 to 139 (8 are starred) Washington, D. C., defended by Butler at outbreak of the war.

*173, *174, 175 New Orleans, where Butler held possession as Military Governor.

*2 The Capitol of Massachusetts, where Butler was Governor.

*132, *134 The Capitol and House of Representatives, where he served.

James Russell Lowell, poet and educator (1819-1891).

8 Birthplace and home of Lowell at Cambridge, Mass.

*7 Home of Longfellow, the friend and neighbor of Lowell.

1 to 6 (4 are starred) Scenes around Boston familiar to Lowell.

Gen. William Tecumseh Sherman, noted general of Civil War (1820-1891).

*54, 55 West Point Military Academy, where Sherman was graduated.

*284, 285, *286 Modern scenes in San Francisco, where he engaged in banking.

184 Chattanooga, Tennessee, at which battle Sherman fought with distinction.

*159 Savannah, the terminus of Sherman's march through Georgia.

Ulysses Simpson Grant, celebrated general and eighteenth President of U. S. (1822-1885).

*54, 55 At West Point, where Grant was trained.

*398, *400 Scenes in Mexico, where Grant served with the U. S. Army.

*187, *188, *189 St. Louis, where he settled at the close of the Mexican War.

*216, 217, *218 Farming in Illinois, to which state Grant later moved.

184 Lookout Mountain, Tennessee, scene of one of Grant's most brilliant victories.

*131 Pennsylvania Avenue, Washington, D. C., down which Grant's victorious troops marched.

*129 The War Department in Washington, where Grant served as Secretary of War.

*138 The Cabinet Room in which he sat as a member of the official family.

*137 The White House, where Grant lived during his Presidency.

*128, *130, *131 to 136 (3 are starred) Other scenes in Washington, D. C.

*38, 39 Scenes in New York City, financial district, where Grant was interested.

954 to 978 (16 are starred) Scenes in Japan, where Grant visited on his trip around the world.

*48 Grant's Tomb in New York City.

Thos. Wentworth Higginson, soldier and historian (1823-1911).

*7, 8 In Cambridge, where he was born and received his education.

*2 Capitol at Boston, where he served as a legislator.

1, *3, *4, *5, 6 Other scenes in Boston.

Bayard Taylor, traveler and author (1825-1878).

954 Mississippi Bay, Japan, where Taylor went with Perry in 1853.

*495 to 536 (24 starred) Scenes in England through which Taylor traveled on foot.

*572 to *595 (18 starred) Scenes in Norway through which he traveled, and of which he wrote.

*621 to *638 (12 are starred) Scenes in Germany where he traveled and at last died.

Carl Schurz, American general and author (1829-1906).

*638 Cologne, Germany, near which Schurz was born.

*676, 677 Scenes in Madrid, where he served the United States as Minister to Spain.

*107 Gettysburg, where he served the Union well.

184 Chattanooga, at which battle he won the commission of Brig.-General.

*188, *189 St. Louis, Mo., where Schurz lived for a time.

*128 to 139 (8 are starred) Scenes in Washington, where he served as Senator and Secretary of the Interior.

*29 to *44 (10 are starred) Scenes in New York City, where he was editor of the New York *Evening Post.*

James G. Blaine, statesman, diplomat, orator and author. (1830-1893.)

*134 The House of Representatives, where Blaine served.

*132 The U. S. Capitol, where Blaine served as Senator (Senate Chamber at near end).

*137 The White House at Washington, where he was a frequent and welcome guest.

*138 The Cabinet Room, where he served as Secretary of State.

*130 Overlooking the State Department and Lafayette Square, where Blaine lived at the time of his death.

*131, 133, 135, 136 Other scenes in Washington, D. C.

James Abram Garfield, twentieth President of the United States (1831-1881).

*132 The Capitol at Washington, D. C., where Garfield served as Senator.

*129, *137 The White House, where he lived in Washington while President.

*138 The Cabinet Room once occupied by Garfield and his official family.

*128, *130, *131, 133, *134, 135, 136, 139 Other scenes in Washington.

82, *83 On the Jersey coast, not far from where Garfield died.

Phillip D. Armour, manufacturer and capitalist (1832-1901).

*213 Cattle in great Union Stock-Yards in Chicago, Ill.

*214 A half mile of pork in Armour's great packing house, Chicago, Ill.

*212, *215 In Chicago, the city in which Armour lived and amassed his fortune.

Melville W. Fuller, Chief Justice of the United States (1833-1910).

133 Chief Justice Fuller administering the oath of office to President McKinley.

135 The Supreme Court room in Washington where Chief Justice Fuller served.

*128 to *132, *134, 136 to 139 (2 are starred) Other scenes in Washington, D. C.

*212 Scene in Chicago where Mr. Fuller had practised law.

*134 Chief Justice Fuller listening to Secretary Hay's eulogy of McKinley in House of Representatives, Washington.

Edmund Clarence Stedman, poet and banker (1833-1906).

*38, 39 Wall and Broad Streets, where Mr. Stedman was engaged in banking and brokerage.

*32 Scene from dome of the World Bldg., New York City, for which paper Mr. Stedman was one time war correspondent.

*29, *30, 34, 35, 36, *48 Other scenes in New York City, where Mr. Stedman lived and worked.

Chas. W. Eliot, celebrated educator and writer (1834).

*171 Dr. Eliot and other guests at Tuskegee Institute, Alabama.

*131, *132 Scenes in Cambridge, Mass., where Dr. Eliot has spent most of his life.

Phillips Brooks, noted preacher and Episcopal Bishop of Massachusetts (1835-1893).

1 to *5 (4 are starred) Scenes in Boston where he was born.

6 On Copley Square, Boston, opposite Trinity Church, where he preached.

142 Christ Church at Alexandria, where he attended during his seminary days.

128 to 140 (8 are starred) Scenes about Washington with which he was familiar.

106 Independence Hall in Philadelphia where he was rector of the Church of the Advent.

Lyman Abbott, noted preacher and editor (1835).

*171 Dr. Abbott a guest of Booker T. Washington at Tuskegee, Alabama.

1 to 8 (5 are starred) In Boston, Mass., where Dr. Abbott was born.

*29 to *48 (13 are starred) Scenes in New York City where he lives and works.

Gen. William Rufus Shafter, U. S. General in command of the army in Cuba (1835-1906).

*427 The hills south of Santiago, Cuba, where the American army under Shafter was encamped.

*422 The wreck of the battleship *Maine* in Havana Harbor, Cuba.

Grover Cleveland, twenty-first and twenty-third President of the United States (1837-1908).

58 The Capitol at Albany, New York, where he served as Governor.

*129 to *137 (6 are starred) Views of the White House where Mr. Cleveland lived during two terms, Washington, D. C.

*130 The Capitol and Congressional Library from the Monument at Washington, D. C.

*131 Rear view of the White House and Pennsylvania Avenue which separates it from the Capitol.

133 An inauguration of a President at Washington, D. C.

*138 The table where Cleveland sat at the head with his official family.

*128, *132, *134, 135, 136, 139 Other scenes in Washington, D. C.

341 to 348 (6 are starred) Hawaiian Islands in which Cleveland took a great interest.

Andrew Carnegie, steel magnate, capitalist and founder of libraries (1837).

*171 Mr. Carnegie a guest of Booker T. Washington at Tuskegee, Alabama.

*119, 120, *121 Great steel plant at Pittsburgh, where Mr. Carnegie amassed his fortune.

41 Looking up Fifth Avenue, New York City, in the direction of the Carnegie mansion.

*29 to *48 (13 are starred) Other scenes in New York, where Mr. Carnegie is a most prominent figure.

*537 to *553 (10 are starred) Scenes in Scotland, the native land of Andrew Carnegie.

William Dean Howells, noted author (1837).

*29 to *44 (10 are starred) Scenes in New York, where he lives and writes.

*740, *742 Scenes in Venice where he served as Consul.

George Dewey, American admiral and hero of Manila Bay (1837).

139 Admiral Dewey and other naval officers in Washington, D. C.

*48 Battleships in the Hudson River at New York City.

145 Battleships leaving Hampton Roads on the World Cruise.

*349 Manila Bay entered by Dewey on that memorable May 1, 1898.

350, *351, *352 Other scenes in Manila.

927 Hong-Kong Harbor from whence Dewey sailed.

*128 to *138 (8 are starred) Scenes in Washington where Dewey lives.

41 Fifth Avenue in New York City, scene of the great Dewey demonstration.

J. Pierpont Morgan, banker, organizer and art patron (1837-1913).

*38 Looking west up Wall Street, past the banking house of Morgan & Co.

*33 Looking north up Hudson River over Morganized steamship lines.

41 Looking north up Fifth Avenue in the direction of the Museum of fine arts to which Mr. Morgan gave much.

*29 to *32, 34, 35, *42, *43 to *48 (5 are starred) Other scenes in New York City where Mr. Morgan lived and was so prominent a figure.

725 to *742 (10 are starred) Scenes in Italy, where Mr. Morgan spent much time and gathered art treasures.

*785 Scenes in Egypt, where Mr. Morgan carried on research work.

*621, 622, 623 Scenes in Berlin, where Mr. Morgan was a welcome guest and commanding figure.

*653 to 660 (6 are starred) Scenes in Paris, where Mr. Morgan made some notable purchases.

*495 to 508 (9 are starred) Scenes in London, where Mr. Morgan collected many works of art.

*607, *608 Scenes in St. Petersburg, where Mr. Morgan was honored.

John Hay, diplomat, statesman and poet (1838-1905).

*138 Cabinet Room in which Hay served as Secretary of State.

*131, 137 The White House, where he served as private secretary to Lincoln.

*129 The State Department from top of the monument, Washington, D. C.

*128, *130, *132, 133 to 136 (1 is starred), *138, 139 Other scenes around Washington.

653 to *659 (6 are starred) Scenes in Paris, where he served as Secretary of the U. S. Legation.

*751 to *755 (3 are starred). Scenes in Vienna, where he served as charge d'affaires.

*495 to 503 (5 are starred) Scenes in London, where he served as Ambassador.

327 The Panama Canal, which has raised the question of the meaning of the Hay-Pauncefote Treaty.

*134 Secretary Hay making the address at McKinley memorial.

John Muir, geologist and author (1838).

*537 to *553 (10 are starred) Scenes in Scotland, the native land of Muir.

*288 to *292 (3 are starred) Scenes in the Yosemite Valley with which his name is inseparable.

*279 to *287 (8 are starred) and *293 to 300 (5 are starred) Scenes in other parts of California of which he has written.

*316 to *319 (3 are starred) Scenes in Alaska, where he made explorations.

*389 to 397 (6 are starred) Scenes in the Arctic, where he went in 1881 in search of the *Jeanetta.*

Gen. Elwell Stephen Otis, commanding general of the U. S. Army in the Philippine Islands (1838-1909).

*352 The American Army in the Philippines, Gen. Otis in command.

*349, 350, *351, 353 to *363 (7 are starred) Other scenes in the Philippines, where Gen. Otis was Military Governor.

Gen. Samuel G. Armstrong, soldier and educator, founder of Hampton Institute (1839-1893).

341 to *348 (6 are starred) In the Hawaiian Islands, where he was born.

*171 Booker T. Washington, a product of Armstrong's work.

*170 Work at Tuskegee, a school inspired by Armstrong.

Francis Bret Harte, celebrated writer and author (1839-1902).

58 The Capitol at Albany, New York, in which city Harte was born.

*284, *286 Scenes in San Francisco, to which city he removed in 1864.

*29 to *43 (9 are starred) Scenes in New York City, where he later lived.

*279 to *283, *287 to *292 (4 are starred) Scenes in California of which he has written.

John D. Rockefeller, oil magnate, capitalist and patron of education (1839).

*38, 39 Wall and Broad Streets, New York City, where Mr. Rockefeller's name is one to command attention.

41 Fifth Avenue, New York City, looking north in the direction of Mr. Rockefeller's city home.

85 A huge fire at the Standard Oil Works in New Jersey.

*127 Oil wells in western Pennsylvania, where Mr. Rockefeller made his fortune.

915 Oil wells in Burma worked by American machinery.

*48, *80 North along the Hudson toward Mr. Rockefeller's country estate in the Pocantico Hills, New York.

Winfield Scott Schley, American admiral—ranking officer at Battle of Santiago (1839-1911).

139 Rear Admiral Schley with Dewey and other fellow officers in Washington.

*423 The harbor at Santiago, where he had Cervera bottled up.

424 The coast, where he chased Cervera's fleet and destroyed it, Cuba.

425 The Spanish flagship *Colon* after the Battle of Santiago.

*422 The wreck of the *Maine* in Havana Harbor, Cuba.

*48, 145 Some of the ships commanded by Schley.

*389 to 397 (6 are starred) Scenes in the Arctic, whither he once commanded an expedition to find Greely.

William Thomas Sampson, Admiral in command of U. S. fleet at Santiago (1840-1902).

*422 The wreck of the battleship *Maine* in Havana Harbor.

424 Santiago Harbor, where Hobson under Sampson bottled up Cervera's fleet.

*423 The coast from Morro Castle, Santiago, where the battle was fought.

425 The Spanish flagship *Colon*, a complete wreck after the battle of Santiago.

*48, 145 Our battleships in times of peace.

Joaquin Miller, California ranchman and poet (1841-1913).

277 A mine prospector hunting for gold as did Miller in his early days.

*128 to 139 (8 are starred) Scenes in Washington, D. C., where Miller served as a journalist.

300 Mt. Shasta, which inspired the poem, "Shadows of Shasta."

*279 to 290 (9 are starred) Scenes in California which have inspired many of Miller's poems.

Rev. Charles Henry Parkhurst, noted preacher, reformer and writer (1842).

34 Dr. Parkhurst's church on Madison Square, New York City, where he has been since 1880.

*29 to *33, 35 to *48 (8 are starred) Other scenes in New York City, which no man probably knows better.

William McKinley, twenty-fourth President of the United States (1843-1901).

133 President McKinley taking the oath of office, Washington, D. C.

*132, *134 The Capitol and House of Representatives where he served as Congressman.

*129, *137 The White House, where he lived as President.

*138 The Cabinet Room, where he met with his official family.

*131 Pennsylvania Avenue, Washington, down which passed the McKinley funeral procession.

*128, *130, 135, 136 Other scenes in Washington.

139 Some of the naval officers that served under McKinley as commander-in-chief.

140 Making paper currency (backed by gold), Washington, D. C.

145 Some of the battleships that won honors for the U. S. during the McKinley administration.

*48 Battleship fleet in the Hudson River, where the *Viscaya* paid us a visit.

*422 The Battleship *Maine* wrecked in Havana Harbor, Cuba.

*349 Manila Bay, where Dewey won victory.

*427 U. S. Army encamped south of Santiago, Cuba.

*423 Morro Castle and Santiago Harbor, Cuba.

424 From Morro Castle along the coast where the great naval battle was fought.

*352 The U. S. Army in the Philippine Islands.

*54, 55 West Point, where our officers are drilled.

144 The Government parade grounds at Fort Myer, Virginia.

*236 A typical army barracks in the west, Fort Yellowstone.

Robley D. Evans, American admiral (1846).

139 Evans and other naval officers in Washington, D. C.

*48, 145 Battleships of the United States starting on the memorable world trip.

424 Coast of Cuba, where the Spanish fleet was destroyed.

*128 to *138 (8 are starred) Other scenes in Washington.

425 Wreck of Cervera's flagship *Colon* off Cuban coast.

959 to 963 (3 are starred) Scenes in Tokyo where Evans and his fleet were royally entertained on the world cruise.

Augustus Saint Gaudens, noted sculptor (1848-1907).

34 The Diana on the tower of Madison Square Garden by St. Gaudens.

*555, *556 Scenes in Dublin where St. Gaudens was born.

*29 to *48 (13 are starred) Scenes in New York, where he studied and has worked.

725 to *729 (3 are starred) Scenes in Rome, where he studied.

*653 to *659 (6 are starred) Scenes in Paris where he studied.

Jacob Riis, author and social reformer (1849-1914).

*604, *605, 606 Scenes in Denmark, the land where he was born.

*42 The tenements of New York City with which he was so closely identified.

*29 to 41 (7 are starred) Other scenes in New York City where he was prominent for many years.

*137 The White House in Washington, where he often was a welcome guest.

*130 to *134 (4 are starred) The Capitol at Washington, D. C., where his influence was felt.

58 The Capitol at Albany, where he at times wielded a great influence for good.

Oscar Straus, distinguished business man, statesman and diplomat (1850-1912).

*777 Scenes in Constantinople, where he served as Minister to Turkey.

*29 to *44 (10 are starred) Scenes in New York City, where he lived for many years.

Francis Marion Crawford, celebrated novelist (1854-1909).

*634 Heidelberg, Germany, where he was a student.

725 to *729 (3 are starred) Scenes in Rome where he studied.

*883 to *906 (12 are starred) Scenes in India of which he has written.

*730 to *742 (7 are starred) Other scenes in Italy of which he has written so much.

Robert Edwin Peary, U. S. naval officer, geographer and discoverer of the North Pole (1856).

*391 Peary's ship *Diana* putting into winter quarters, Cape Sabine, Baffin Bay.

*389 Arctic explorers preparing for the long winter night at Cape Sabine (79° North lat.).

*396 The *Diana* and *Nova Zembla* among the icebergs in far north, Dexterity Harbor.

*394 The west coast of Greenland explored by Peary.

390, 392, *393 Esquimaux and their homes in the far north.

*395 Esquimaux family in their summer home, Greenland.

*48, 139, 145 Scenes in connection with the navy of which Peary is an officer.

William Howard Taft, celebrated jurist and twenty-sixth President (1857).

*131, *137 The White House, where President Taft lived.

135 The Supreme Court room in the Capitol, Washington, D. C.

*349 to *363 (10 are starred) The Philippine Islands, where he served the country as Governor-General.

*129 The War Department in Washington, D. C.

327 to *340 (7 are starred) The Panama Canal, which he carried through.

*398, 399, *400 Mexico City and Chapultepec Castle, which was a source of solicitude.

*128, *130, *132, 133, *134, 136, 139 Other scenes in Washington.

Woodrow Wilson, educator, historian and twenty-seventh President of U. S. (1856).

*138 President Wilson and his Cabinet.

*129, *137 The White House, where as President he resides.

133 An inauguration of a President.

*131 Looking down upon the roof of the Executive Office.

*128, *130, *132, *134, 135, 136, 139 Other scenes in Washington, D. C.

Booker T. Washington, negro educator, author and president of Tuskegee Institute (1859).

*171 Dr. Washington and noted guests at Tuskegee, Alabama.

*170 The students at work in the fields at Tuskegee Institute, Alabama.

*149, *150, *160, 172 Some of the colored people of the South.

Theodore Roosevelt, soldier, statesman, journalist, author—twenty-fifth President of U. S. (1858).

953 President Roosevelt and envoys of the Mikado and Czar on board the *Mayflower.*

*29 to *48 (13 are starred) Scenes in New York City, where Mr. Roosevelt was police commissioner.

58 The State Capitol at Albany, New York, where he served as governor.

*129 Overlooking the Navy Department Bldg. in Washington, where he was assistant secretary.

*130 Looking from the monument to the Capitol over the Agricultural Department to which he gave new impetus, Washington, D. C.

*137 The White House, where he lived during his presidency.

*131 Looking down upon roof of the new executive office, which he added to the White House.

*132 The Capitol at Washington, D. C.

133 President Roosevelt witnessing the McKinley inauguration, Washington, D. C.

*134 President Roosevelt attending the McKinley Memorial in the House of Representatives.

135 The Supreme Court room in Washington.

139 Some of the officers of the navy of which he was assistant secretary and later commander-in-chief.

145 The battleship fleet starting on its memorable cruise around the world.

*257, 258, *270 Western ranch life of which Mr. Roosevelt writes from experience.

328, 329, 333, 335 to *340 (3 are starred) Scenes at Panama Canal, for which President Roosevelt was largely responsible.

55, *236, *352, *427 The American Army, in which Col. Roosevelt played an important part.

809 to 827 (9 are starred) Scenes in East Africa, where he spent a year in hunting and collecting big game.

*621, 622 Scenes in Berlin, where he was royally entertained by Emperor William.

*653 to *659 (6 are starred) Scenes in Paris, where he made a memorable address.

*495 to 508 (9 are starred) Scenes in London, where he made another address.

*107 Gettysburg battlefield, where he made a notable address.

William Jennings Bryan, orator, statesman and diplomat (1860).

*138 Mr. Bryan as Secretary of State in Wilson's Cabinet.

*134 In the House of Representatives at Washington, D. C., where he served.

*128 to 133 (5 are starred), 135, 136, *137 Other scenes in the Capital City, where Mr. Bryan is a conspicuous character.

Richmond P. Hobson, celebrated naval engineer, hero of the *Merrimac*, orator and legislator (1870).

*423 The mouth of Santiago Harbor, where Hobson sunk the *Merrimac*, and Morro Castle, where he was imprisoned.

424 Coast where the Spanish fleet was destroyed.

425 Cervera's flagship *Colon* destroyed at Battle of Santiago.

*422 The *Maine* wreck, inspected by Engineer Hobson.

*421 The Plaza at Havana, Cuba.

*653 to *659 (6 are starred) Scenes in Paris, where he studied five years.

*130, *131, *132, *134 The Capitol and House of Representatives, where Hobson serves as Congressman.

*48, 145 Some of our battleships for which Hobson has been a leading advocate.

139 Officers of the navy in uniform.

*946 to *952 (3 are starred) Some of the Japanese soldiers against whose growing prowess Hobson warns the United States.

341, *342, *343 and *349 to *363 (10 are starred) Places he was also sent to by the War Department.

Wilbur (1867-1912) and Orville Wright (1871), inventors.

*144 The Wright aeroplane in flight at Fort Myer, Va.

CANADA, CENTRAL AND SOUTH AMERICA

Next in importance to the history of the United States is, to us, that of the neighboring countries on the American continent. The early period of exploration and conquest is most interesting on ac-

count of the adventurous careers of the leaders of the various expeditions. The prominent figures in the frequent revolutions in the Latin-American republics are so constantly kept before the minds of people that it is worth while to know something about them and about the scenes in which events take place that vitally affect our own country and its international relations.

CANADA

Louis Jos. Montcalm, French officer in command at Quebec (1712-1759)—See France.

Gen. James Wolfe, British officer in command at the storming of Quebec (1727-1759)—See England.

Sir Wilfred Laurier, Premier of Canada (1841).

*506 Laurier and other Colonial officials at London, Eng.

Rev. Chas. W. Gordon ("Ralph Connor"), noted preacher and author (1860).

*375 Winnipeg, home city of "Connor."

379 to *384 (4 are starred) Scenes in the Canadian Rockies, which he has helped to make popular.

*259 Cowboy life on the plains of which he has written so interestingly.

*369 to 372 (2 are starred) Eastern Canada, where many of his stirring dramas are enacted.

MEXICO

Hernando Cortez, explorer and conqueror (1485-1547)—See Spain.

Benito Pablo Juarez, noted Indian general and former President of Mexico (1806-1872).

*412 Indians of Mexico of whom Juarez was one.

*398 to *416 (10 are starred) Scenes in Mexico where he was a commanding figure.

Porfirio Diaz, noted Mexican general and former President of Mexican Republic (1830).

*400 Chapultepec Castle, where he spent part of his time.

*398 to *416 (10 are starred) Scenes in Mexico.

Maximilian (***Ferdinand Maximilian Joseph***), Archduke of Austria and Emperor of Mexico (1832-1867).

*751 to *755 (3 are starred) Scenes in Vienna, where he was born.

*398 Mexico City, where Maximilian ruled for a short time.

*400 His royal palace at Chapultepec.

Francisco Madero, Revolutionary leader and former President of Mexico (1873-1913).

*398 In Mexico City, not far from where he was shot.

399 to *416 (10 are starred) Scenes of interest in Mexico.

SOUTH AMERICA

Francisco Pizarro, soldier, adventurer and conqueror of Peru (1471-1541)—See Spain.

Vasco Nunez Balboa, sailor and discoverer of the Pacific Ocean (1475-1517)—See Spain.

Gonzola Pizarro, soldier, adventurer and Governor of Quito (1505-1548)—See Spain.

Simon Bolivar, soldier, statesman and ruler of Venezuela and Colombia (1783-1830).

*440 Overlooking Caracas, Venezuela, his native city.

441 Statue of Bolivar in Caracas, Venezuela.

433, *434, *435 Jamaica, to which he was forced to retire in 1815.

462, *463 Quito, Ecuador, which he captured in 1822.

*456 to *461, *464, 465 Other scenes in Ecuador, which country he added to Colombia.

*466 Lima, which he entered in 1823.

467 to 484 (10 are starred) Other territory added to his great republic.

*442 to 446 (3 are starred) Other scenes in Venezuela, his native country.

EUROPE

ENGLAND, SCOTLAND AND IRELAND

Of all European countries none are so closely associated with the United States as England, Ireland and Scotland. Among our great statesmen, soldiers and captains of finance and industry, are not a few descendants of the sturdy Scotch. From Ireland have come millions of people who through their geniality, versatility and warm-heartedness have greatly enriched American life. But it is England, in particular, that in several ways may be looked upon as the "mother country" of the United States. A very large proportion of the great men of this country are of English ancestry. The English language is our language, and English literature is looked upon as our own. The poets, dramatists, orators and essayists of England are studied here with the same ardor as in English schools. English laws and institutions furnished the model and basis of much that is important in our own public and political life. English statesmen and orators frequently had to deal with the affairs of America.

For all these reasons students might well be taught to observe the great men of these three races in their own homes.

Julius Cæsar, (100 B. C.—44 B. C.).

*513, *514 Scenes on the coast of Britain, which Cæsar invaded.

*498 Tower of London, which stands on the site of an old Roman fortification called "Cæsar's Tower."

St. Patrick, Apostle of Ireland (fourth and fifth centuries)

*555, *562, *567 Scenes in Ireland, country where St. Patrick preached.

Alfred the Great, first great King of England (849-901).

*495 Royal Albert Docks on the Thames, not far from where Alfred met the Northmen.

574 A Viking ship such as was used at that time.

Edward the Confessor, King of England (1004-1066).

*502, *504 Westminster Abbey, on place where old Westminster Abbey stood, which Edward built and in which he was buried.

William the Norman, Conqueror and King of England (1027-1087).

497, *498 The Tower of London built by William.

*502, *504 Westminster Abbey, successor to a conspicuous structure standing in William's time.

*509 Windsor Castle, partly built by William.

753 Armor such as William and his soldiers used.

*860 The way William's swords were made.

William II, King of England (1056-1100).

*529 Durham Cathedral was begun in his reign.

Thomas A' Becket, statesman and Catholic churchman (1118-1170).

*512 Canterbury Cathedral, showing altar where Becket was slain.

753 Armor such as Becket's knights wore.

*504 Westminster Abbey in which Prince Henry was crowned by Archbishop of York.

531 Ruins of Furness Abbey, which was built in Becket's time.

Richard I., or the Lion-Hearted, King of England, leader of the Crusades (1157-1199).

497, *498 The King's Tower in London.

847 Jerusalem from the Mount of Olives, where Richard stood and refused to look at the city he could not deliver.

Henry III, King of England (1207-1272).

*502 Westminster Abbey rebuilt by Henry, and Parliament Buildings, the lower branch of which was established during Henry's reign.

*504 Westminster Abbey (front view), where the Kings are crowned.

King David of Scotland (died 1153).

*540 Melrose Abbey, which was built originally by King David.

Wallace of Scotland, great military leader and patriot (1274-1305).

*547 to 550 (3 are starred) Stirling Castle and surrounding country, where the battles of Stirling and Bannockburn were fought.

551, 552, *553 Other scenes in the Highlands of Scotland associated with Wallace.

496 London Bridge, successor to the structure on which Wallace's head was hung by Edward I.

Robert Bruce, great military leader and deliverer of Scotland (1274-1329).

*547 to 550 (3 are starred) Scenes of Stirling Castle and surroundings, where Bruce defeated the English at Bannockburn.

*540 Melrose Abbey, a beautiful structure in Bruce's kingdom.

551, 552, *553 Other scenes in the Highlands of Scotland.

Edward II, King of England (1284-1327).

*504 Westminster Abbey, where Edward was deposed.

Edward III, noted military leader and King of England (1312-1377).

*513 The Dover chalk cliffs, just across the channel and in sight of Calais, which he took after long siege.

*512 Canterbury Cathedral, in which still hang the shield and helmet of the "Black Prince," Edward's son.

*509 Windsor Castle, enlarged by Edward.

Geoffrey Chaucer, early English poet (1340-1400).

500 Cheapside, London, where Chaucer was a prominent character and of which he wrote.

*512 Interior of Canterbury Cathedral.

Henry IV, King of England (1367-1413).

*509 St. Paul's in London, on the site of old St. Paul's, where he caused the body of his rival, Richard II, to be exposed.

*504 Westminster Abbey, where he was taken ill and died.

Henry VI, King of England and promoter of education (1421-1471).

*498 The Tower of London in which Henry was finally imprisoned.

*509 Windsor Castle from which Henry watched the building of Eton School.

Richard III, King of England (1452-1485).

*498 The Tower of London, where Hastings and the two princes were murdered.

*504 Westminster Abbey, where Elizabeth fled for protection.

Henry VII, King of England and patron of architecture (1457-1509).

*529 Durham Castle, which was started during Henry's reign.

14, *364 Portions of the New World explored by the Cabots who sailed for Henry VII.

Cardinal Wolsey, Catholic churchman and statesman (1471-1530).

*512 Canterbury Cathedral, where Wolsey once served as Chaplain to the Archbishop.

511 Magdalen College at Oxford, which will ever be associated with Wolsey's name.

Sir Thomas More, author and chancellor of England (1478-1535).

*498 The Tower of London, where More was beheaded.

Henry VIII, King of England (1491-1547).

652 The "Field of the Cloth of Gold," where Henry met the King of France.

*504 Westminster Abbey, where Anne Boleyn was crowned.

*498 The Tower of London, where More, Anne Boleyn and others were executed.

531 Furness Abbey, destroyed by Henry VIII.

John Knox, noted preacher and reformer (1505-1572).

*537, *538 Edinburgh, where Knox occupied the pulpit of St. Andrews, and where he died.

*672 Dieppe, France, where Knox fled from the wrath of Mary Tudor.

Roger Ascham, author and tutor to Queen Elizabeth (1515-1568).

*509 Windsor Castle, where Ascham was tutor to Elizabeth and Mary.

Queen Elizabeth, Queen of England (1533-1603).

*498 The Tower of London, in which Elizabeth was imprisoned by Mary.

*509 Windsor Castle, where Elizabeth spent much time.

*517 A house in Exeter occupied by her friend and courtier, Sir Walter Raleigh.

*504 Westminster Abbey, where she was crowned, and where she is buried.

689 The city of Cadiz, Spain, near which Drake defeated the Spanish fleet.

*496 London Bridge, almost on spot of the old bridge, where hundreds were hung for treason.

*554, *555, *556 Scenes in south of Ireland, where insurrection arose.

141 to *148 (2 are starred) Scenes in the state of Virginia named after the "Virgin Queen."

Sir Francis Drake, courtier, naval officer and explorer (1545-1595).

*517 The house where Drake lived in Exeter, England.

689 Cadiz, near which Drake won the battle with the Spanish Armada.

329, *331, *332 Scenes in Panama explored by Drake.

*286, *287, *447, 465, *476, *486 Other scenes on western coast of America, explored by Drake.

Sir Martin Frobisher, naval officer and explorer (died 1594).

689 Cadiz, near which Frobisher fought against the Spanish Armada.

*389 to 397 (6 are starred) Scenes along northeast coast of America explored by Frobisher.

Mary, Queen of Scots, claimant of the English throne (1542-1587).

*548 Holyrood, old home of ill-fated Mary, Queen of Scots.

*547 Stirling Castle, where Mary was crowned when a baby.

*549, 550 Other scenes around Stirling, Scotland.

*537, *538, 539 Scenes around Edinburgh, Scotland.

*498 The Tower of London, where Davison, who had despatched warrant for Mary's execution, was imprisoned.

Sir Walter Raleigh, courtier, explorer and colonizer (1552-1618).

*517 Raleigh's house in Exeter, England.

*509 Windsor Castle, where Raleigh was a distinguished courtier.

497, *498 The Tower of London, where Raleigh was executed after long imprisonment.

*496 London Bridge, near site of the old bridge, which presented gruesome sights in Raleigh's day.
*431 The tobacco plant introduced into England by Raleigh.
145, *149, *150 Scenes in America suggestive of Raleigh.

Henry Hudson, sailor and explorer (died 1611).

*29 to *33, *48, 54 to *57 (3 are starred), *80 On the Hudson River, discovered by Hudson.
*394 Greenland, once visited by Hudson.
*364 Nova Scotia, where Hudson explored Yarmouth Harbor.
14, *61, 62, 82, *83 East coast of America explored by Hudson.

Sir Francis Bacon, philosopher, author and statesman (1561-1626).

*509 Windsor and Kenilworth, where Bacon was a welcome guest.
503 The House of Lords, before which body Bacon was impeached.
*498 The Tower of London, where Bacon was imprisoned for a short time.

William Shakespeare, poet and playwright (1564-1616).

*525 Living room in Shakespeare's house at Stratford-on-Avon.
*526 Anne Hathaway's cottage at Shottery, England.
*496 to *502 (4 are starred), *512 to *517 (4 are starred) The tower and other scenes closely connected with Shakespeare in England.
*728, *736, *742 Scenes in Venice, Florence and Rome associated with Shakespeare's plays.

James I, King of England, persecutor of the Pilgrims (1566-1625).

*507 Hampton Court, where James considered the "Great Petition."
641 Delftshaven, Holland, to which the Pilgrims fled from his oppression.
*509 Windsor Castle, England.

Ben Jonson, poet and playwright (1573-1637).
*496 to *501 (3 are starred) Scenes in old London, where Jonson was a noted figure.

Sir John Eliot, English patriot (1592-1632).
*498 Tower of London, in which Eliot died.

Thomas Wentworth, English statesman (1593-1641).
*502 Houses of Parliament of which body he was a member.
503 House of Peers in which body he sat, and by whom he was tried.
*498 Tower of London in which he was executed.

Oliver Cromwell, soldier, reformer and protector of England (1599-1658).
*502 Houses of Parliament of which body he was a member.
*498 The Tower of London where Charles I was executed.
499, 500, *501 Other scenes of interest in old London.

John Milton, poet (1608-1674).
499, 500, *501 Scenes in old London, where Milton lived and died.
*509 Windsor Castle, near which Milton once lived and wrote.

Sir Christopher Wren, great English architect (1632-1723).
*504 The Towers of Westminster designed by Wren.
500 St. Mary-le-Bow Church, designed by Wren.
*507 Grounds of Hampton Court, which palace he designed and where he died.

Sir Isaac Newton, philosopher and scientist (1642-1727).
*504 Westminster Abbey, where he is buried.

Captain William Kidd, noted pirate (died 1701).
*61 to 64 (2 are starred) The Long Island beach where Kidd is believed to have buried his treasure.
*29, *30 New York Harbor, to which he sailed in 1696.
*2 to *5 Boston, Mass., where Kidd was tried.
*495 to 500 (3 are starred) London, where he was executed.

Jonathan Swift, writer, satirist and author (1667-1745).

*556 Trinity College and city where Swift was born and educated.

500 Cheapside in London, where he was a well-known figure.

*555 The country surrounding Dublin.

Alexander Pope, poet (1688-1744).

500 Cheapside, London, where Pope was a prominent character.

Joseph Addison, noted journalist and essayist (1672-1719).

*496 to 500 (2 are starred) Scenes in old London, where Addison was a prominent character.

*506 The colonial secretaries of England of which body Addison was once a member.

511 Magdalen College at Oxford, from which he was graduated.

General Wolfe, English commander at Quebec (1727-1759).

*369, 370 Quebec, Canada, where Wolfe fell.

Oliver Goldsmith, poet (1728-1774).

*556 Trinity College, Dublin, Ireland, where Goldsmith was graduated.

*537, *538 Scenes in Edinburgh, where he studied medicine.

500 Cheapside, where Goldsmith was a familiar character in his day.

Edmund Burke, celebrated lawyer, orator and statesman (1729-1797).

*556 Trinity College in Dublin, where Burke was educated.

*555 The country around Dublin.

*502 The Houses of Parliament in London.

503 The House of Peers, before which body Burke tried Hastings.

Warren Hastings, British statesman (1732-1818).

892 to *897 (2 are starred) Calcutta, India, where he served England as member of the Council.

*906 Madras, India, where he also served as member of the Council.

500 The House of Lords, before which body Hastings was tried.

*883 to *906 (12 are starred) Other scenes in India over which Hastings ruled.

*507 Indian soldiers in the service of Great Britain.

Horatio Nelson (Lord Nelson), British naval officer; hero of Trafalgar (1758-1805).

*730 Naples, to which city Nelson retired after the Battle of the Nile.

*604 Copenhagen, where Nelson gained a great naval victory.

*692 Gibraltar, near which was fought the memorable Battle of Trafalgar.

Robert Burns, Scotch plowman poet (1759-1796).

*546 The birthplace of Burns at Alloway near Ayr, Scotland.

*537, *538 Edinburgh, Scotland, where Burns was royally entertained.

Arthur Wellesley (Duke of Wellington), English general; hero of Waterloo (1769-1852).

*556 Dublin, Ireland, in which city he was born and where he served in Parliament.

*502 Houses of Parliament, London.

*604 Copenhagen, in the expedition against which he served.

*676, 677 Madrid, which city Wellington and his troops occupied in 1812.

*653 to 659 (6 are starred) Paris, where Wellington was Ambassador.

*751 to *755 (3 are starred) Vienna, where he was Plenipotentiary.

*647, 648 Brussels, near which the Battle of Waterloo was fought.

*607, 612 St. Petersburg, Russia, where he served England as Ambassador.

*506 The Governors of an Empire, in which body Wellington once served.

William Wordsworth, poet (1770-1850).

530 Dove Cottage, Wordsworth's old home at Grasmere, England.

Sir Walter Scott, poet and novelist (1771-1832).

*537 Edinburgh, Scotland, where Scott was born.

*538 Princess St., Edinburgh, showing Scott Monument.

*540 Melrose Abbey, Scotland ("Lay of the Last Minstrel").

541 Tantallon Castle, where Douglas met Marmion.

*547 to 550 (3 are starred) Stirling Castle and surroundings ("The Lady of the Lake").

551 Ben Venue from across Loch Achray, Scotland ("The Lady of the Lake," "Rob Roy" and others).

552 The Brig O'Turk at Glenfinlas, Scotland ("The Lady of the Lake").

*553 Loch Katrine and Ellen's Isle, Scotland ("The Lady of the Lake").

Daniel O'Connell, great Irish leader in Parliament (1775-1847).

*556 Looking past Trinity College toward the O'Connell monument in Dublin, Ireland.

*569 Picturesque home of a prosperous farmer near the birthplace of O'Connell in County Kerry, Ireland.

*502 Houses of Parliament in London, where O'Connell represented his country.

George Noel Gordon (Lord Byron), poet and traveler (1788-1824).

*495 to 508 (9 are starred) London, where Byron was born.

*547 to *553 (4 are starred) The Highlands of Scotland, which Byron visited as a boy of seven.

*740, 741, *742, 725 to 739 (8 are starred) The "Bridge of Sighs" and other scenes in Venice and Italy of which Byron wrote.

*761 to *776 (8 are starred) Scenes in Greece visited by Byron and of which he wrote.

*777 to *782 (3 are starred) Scenes in Constantinople of which he wrote.

*647 to *651 (4 are starred) Scenes in Belgium of which he wrote.

Michael Faraday, famous English physicist and chemist (1791-1867).

*507 Grounds of Hampton Court Palace, London, where Faraday died.

Thos. Carlyle, philosopher, essayist and historian (1795-1881).

*537, *538 Edinburgh, where Carlyle was educated and where he lived and worked.

Thos. Babington Macaulay (Lord Macaulay), historian, essayist and poet (1800-1859).

*502 The Houses of Parliament in London, where Macaulay served.

503 The House of Peers in which he served.

*883 to *906 (12 are starred) Scenes in India, where he served as a member of the Council.

Benjamin Disraeli, Lord Beaconsfield, Premier of England (1804-1881).

*502 Houses of Parliament in London in which building Disraeli served.

503 House of Peers, where much of his best work was done.

*495 to *501 (4 are starred), 506, 507 Other scenes in London in which city Disraeli was a conspicuous figure.

*621, 622 Berlin, where he attended the Congress as Plenipotentiary.

Elizabeth Barrett Browning, poet (1806-1861).

*529 Inside the Cathedral at Durham, England, where Miss Browning was born.

*736, 737 Scenes in Florence, Italy, where she died.

John Stuart Mill, philosopher, metaphysician and author (1806-1873).

*502 The Houses of Parliament, where Mill once served as a member.

Charles Robert Darwin, naturalist and author (1809-1882).

*537, *538 Edinburgh, Scotland, where Darwin attended college.

433 to 439 (5 are starred) The Islands of Jamaica and Martinique of which he made a study.

*451, *460, 465, *476, 485 The coast of South America of which he made a study.

*504 Westminster Abbey, in London, where he is buried.

Alfred Tennyson, poet-laureate of England (1809-1892).

*667 In the French Pyrenees, where he traveled with Arthur Hallam.

*751, *752 Vienna, where Hallam died.

*504 Westminster Abbey, where Tennyson is buried.

William Ewart Gladstone, noted Parliamentarian (1809-1898).

*502 The Houses of Parliament, where Gladstone was for years leader of the House of Commons.

503 The House of Peers, a seat in which was often declined by Gladstone.

*495 to 500 (3 are starred) Other scenes in London, where Gladstone was a most prominent figure.

William Makepeace Thackeray, novelist and art student (1811-1863).

892 to *897 (2 are starred) Calcutta, India, in which city Thackeray was born.

*653 to 659 (6 are starred) Scenes in Paris, where he studied art.

*495 to 508 (9 are starred) Scenes in London, where he lived.

Robert Browning, poet (1812-1889).

*495 to 508 (9 are starred) Scenes in London, where Browning lived a long time.

*736, 737 Scenes in Florence, where he spent most of his married life.

*740, 741, *742 Scenes in Venice, where he died.

725 to *735 (6 are starred), *738, 739 Other scenes in his beloved Italy.

*504 Westminster Abbey in the "Poets' Corner" in which he was buried.

Charles Dickens, novelist (1812-1870).

*495 to 508 (9 are starred) Cheapside and other scenes in London familiar to Dickens.

1 to 8 (5 are starred), and *29 to *48 (13 are starred). Scenes in Boston and New York, where Dickens visited in 1859.

*504 Westminster Abbey, where he is buried.

David Livingstone, missionary, geographer and explorer (1813-1873).

*537 to *553 (10 are starred) Scotland, the native country of Livingstone.

809 to *818 (6 are starred) Scenes in East Africa explored by Livingstone.

*821 The Victoria Falls, East Africa, discovered by Livingstone.

825 Forest trail in heart of Africa, over such a trail Livingstone's body was borne to the coast by his faithful followers.

*504 Westminster Abbey, where Livingstone lies buried.

*495 to *501 (4 are starred) Scenes in London, where Livingstone was given "The Freedom of the City."

John Ruskin, art critic and author (1819-1900).

*495 to 508 (9 are starred) Scenes in London, where Ruskin was born.

*736, 737 Scenes in Florence, where he studied and of which he wrote.

*740, 741, *742 Scenes in Venice of which he has written.

725 to 735 (6 are starred), *738, 739 Other scenes in Italy of which he has written.

Alexandrina Victoria (Queen Victoria), H. M., Queen of England (1819-1901).

*505 A coronation procession returning from the Abbey.

*507 Hindu soldiers of the Queen at Hampton Court, London.
*502 The Houses of Parliament, London.
503 The House of Peers, showing the seat of the Queen.
*504 Westminster Cathedral, where Victoria was crowned.
*506 Some of the faithful officials of Victoria's reign.
*509 Windsor, one of the favorite castles of Queen Victoria, enlarged by her.
*495 to *501 (4 are starred) Other scenes in London.
*554 Queenstown, Ireland, named for the Queen at the time of her visit.
*904 The Durbar procession in Delhi, India.
901 Great Durbar Hall in palace of H. H., the Maharaja of Gwalior.

John Tyndall, distinguished British physicist (1820-1893).
*495 to 508 (9 are starred) London, where Tyndall lived.
*700, *705, *710, 711, 712, 714, 717 to 723 (2 are starred) Some Swiss glaciers explored by Tyndall.
*713 The Matterhorn which he scaled.
*805 to 808 (2 are starred) Algiers visited in 1870.

Thomas Henry Huxley, celebrated biologist (1825-1895).
*495 to 508 (9 are starred) Scenes in London, where Huxley lived.
*700, *705, *710 to 714 (2 are starred), 717 to 723 (2 are starred) Some Swiss glaciers explored by Huxley.

Frederick Sleigh Roberts (Lord Roberts), noted English general (1832-1914).
*829, *830, *832, 835 Scenes in the war in South Africa where Lord Roberts was Commander-in-Chief.
*507 Hindu soldiers at Hampton Court in London.
*883 to *906 (12 are starred) Scenes in India, where Lord Roberts made himself famous as Commander-in-Chief of the Queen's forces.

Gen. Charles George Gordon (Chinese Gordon), great British officer (1833-1885).

*828 Cape of Good Hope, where he was once commandant of the British forces.

Joseph Chamberlain, British statesman and secretary for foreign affairs (1836-1914).

*506 Governors of an empire, Hon. Jos. Chamberlain and colonial officials, London.

*829 to 838 (6 are starred) Scenes in South Africa.

James Bryce, British statesman, diplomat and author (1838).

*561 Belfast, Ireland, in which city Bryce was born.

*506 Colonial officials of Great Britain of which Bryce was once a member.

*128 to 139 (8 are starred) Scenes in Washington, D. C., where he has represented his country in the United States.

Charles Stewart Parnell, great Irish leader in Parliament (1846-1891).

*554 to *569 (12 are starred) Scenes in Ireland, the land of his birth and to which he gave his life.

*502 Houses of Parliament in London, where Parnell represented his country.

Horatio Herbert Kitchener (Lord Kitchener), noted English general; hero of South Africa and Khartoum (1850).

*829, *830, *832 Scenes in South Africa, which must ever be associated with Kitchener.

*785 to 804 (11 are starred) Scenes in the Nile Valley, Egypt, where Kitchener conducted a campaign.

Cecil J. Rhodes, South African statesman (1853-1902).

*829 to 838 (6 are starred) Scenes in South Africa which will ever be associated with his name.

SCANDINAVIA

Men from Scandinavia, the Northmen, were probably the first Europeans to approach our coasts

in the Viking ships, their "foam-crested wave-horses." In modern times several of the rulers and writers of Scandinavian lands have occupied a prominent place in history.

Christian IV, King of Denmark (1577-1648).

*572, *573 The city of Christiania, Norway, which he founded.

*604, *605 Copenhagen, where Christian died.

Gustavus Adolphus, King of Sweden (1594-1632).

597 Stockholm, the native city of Gustavus Adolphus.

*598, 599 The Royal Palace of Sweden.

*596 Stockholm, showing Riddarholms Church, where Adolphus is buried.

Charles XII, King of Sweden (1682-1718).

597, *598, 599 Stockholm, Sweden, showing Royal Palace.

*596 Stockholm and Church of Riddarholms, where Charles XII is buried.

*604, *605 Copenhagen, besieged by Charles XII.

*613, 614, 615 Moscow, against which Charles XII unsuccessfully led his army.

*777 to *782 (3 are starred) Constantinople, to which court he fled after defeat at Poltava.

Henrik Ibsen, Norwegian poet and playwright (1828-1906).

*572, *573 Christiania, where Ibsen lived, studied and wrote.

*584 Bergen, where he was made manager of the new theatre.

725 to *728 (2 are starred) Rome, Italy, where he lived for a time.

625 In Dresden, Germany, where he lived for a time.

Björnstjerne Björnson, great Scandinavian poet and playwright (1832-1910).

*572, *573 Christiania, Norway, where he was educated and later lived.

*604, *605 Copenhagen, Denmark, where he studied later.
*584 Bergen, Norway, where he was first director of the theatre.

RUSSIA AND POLAND

The Russians and Poles belong to the large family of nations which are called Slavic. To America Slavs are now coming in increasing numbers. The vast empire of Russia was built up by several great emperors; Russian literature holds a conspicuous place among the literatures of the modern world. The Polish nation had the tragic fate of losing its political independence. Sympathizing with the Americans in their struggle for independence, several noble Poles (Kosciusko, Pulaski) fought in the Revolutionary armies. One modern Polish novelist is known all the world over.

Ivan the Great, (First Czar) of Russia (1440-1505).
*613 Shimmering spires of Holy Moscow (Ivan's Capital) and the great tower which bears his name.
614 The Tower of Ivan and Cathedral of Archangel Michael, where Ivan is buried, Moscow.

Peter the Great, Emperor of Russia and founder of St. Petersburg (1672-1725).
*613, 614, 615 Scenes in Moscow, where Peter was born.
*607, *608, 612 In St. Petersburg, the Capital City which Peter built.
610 The beautiful summer palace of the Czar, the original built by Peter the Great, Peterhof, Russia.
611 In beautiful Peterhof Park, Russia.

*639, *640 Amsterdam, Holland, where he lived for some time and of which he was fond.

Count Lyeff (Leo) Nicolaievich Tolstoi, soldier, philosopher, reformer and author (1828-1910).

*607, *608 Life in St. Petersburg, where Tolstoi lived a considerable time.

*609, *618 Country life in Russia.

610, 611, 612 Royal display in Russia, against which Tolstoi often wrote.

616, 617 Other scenes in Tolstoi's native country.

Henry Sienkiewicz, Polish novelist (1846).

*607 to *618 (5 are starred) Scenes in Russia, Sienkiewicz's native land.

725 to *729 (3 are starred) Scenes in Rome, where much of the plot of "Quo Vadis" is laid.

*279 to 300 (17 are starred) Scenes in California, where he lived for some years.

GERMANY AND AUSTRIA

These two large states were for centuries united politically, and are closely related racially, as a large portion of Austrians are of German descent and speak the German language. Many millions of persons of German extraction have settled in the United States, especially in the states in the Middle West. They have done much as trained artisans and have greatly helped to develop agriculture in this country. The German race has produced some famous rulers, generals and statesmen, but its main contribution to modern civilization lies in the fields of scholarship and music. Along these lines Ger-

mans have exercised a pronounced influence on other countries, also on the United States.

Frederick Barbarossa, Emperor of Germany (1123-1190).

*633 Valley of Danube, south of which was Frederick's hereditary castle of Hohenstaufen.

*726 St. Peter's, Rome, where Frederick was crowned Emperor by Pope Adrian IV, 1155.

*738 Milan, which city Frederick destroyed in war against Lombard cities, 1162.

Albertus Magnus (The Great), celebrated medieval scholar, philosopher and naturalist (1193-1280).

*633 Valley of Danube, where Albertus was born.

*638 Cologne, where he taught and died.

Johann Gutenberg, inventor of art and printing (1400-1467).

*635 Rhine Valley near Bingen, twenty miles from where (Mainz) Gutenberg was born.

Martin Luther, churchman and reformer (1483-1546).

*638 Cologne, Germany, where Luther's writings were burned.

*621 to 637 (10 are starred) Other scenes in Germany, Luther's native land.

725, *726, 727 St. Peter's and scenes in Rome to which he went on monastic business in 1510.

Frederick II (The Great), King of Prussia (1712-1786).

*621, 622, 623 Scenes in Berlin, where Frederick II was born.

*625 In Dresden, where Frederick II signed peace treaty with Austria.

Maria Theresa, Empress of Austria and antagonist of Frederick the Great; and mother of Queen Marie Antoinette of France (1717-1780).

*751, *752, 754 Vienna, where she lived and which she adorned with many fine buildings and institutions.

Johann Wolfgang von Goethe, great German poet (1749-1832).

*621, 622, 623 Berlin, where Goethe lived with Duke Karl in 1778.

725 to *729 (3 are starred) Scenes in Rome, where he lost his son.

*740, 741, *742 Scenes in Venice, where he spent considerable time from 1786 to 1788.

John Wolfgang Amedeus Mozart, composer (1756-1791).

750 Salzburg, where he was born.

*751, *752, 753, *755 Scenes in Vienna, where he lived and died.

Johann Christopher Friedrich von Schiller, great German poet (1759-1805).

*625 Dresden, where he lived with his friend Korner, 1785 to 1787.

Ludwig von Beethoven, composer (1770-1827).

*638 Cologne, near which Beethoven was born.

William I, Emperor of Germany (1797-1888).

*621, 622, 623 Berlin and the Royal Palace where William was born, ruled and died.

*624 to *638 (11 are starred) Other scenes in United Germany which, with the help of Bismarck and Von Moltke, he created.

664 Battlefield where William won military honors, Sedan, France.

660 Versailles, France, where he lived during siege of Paris, and where he was proclaimed Emperor of Germany.

*653 to *659 (6 are starred) Scenes in Paris, which William besieged in 1870.

Helmuth Karl Bernhard von Moltke, noted soldier and statesman (1800-1891).

*604, *605 Copenhagen, where Von Moltke received his military training.

*621, 622, 623 Berlin, where he resided and where he died.

*777 to *782 (3 are starred) Scenes in Constantinople, where he spent four years reorganizing the Sultan's army.

*653 to 660 (6 are starred) Paris, of which he has left letters and the siege of which he directed, 1870.

725 to *729 (3 are starred) Rome, of which he has left letters.

Richard Wilhelm Wagner, musician and composer of opera (1813-1883).

625 The Zwinger in Dresden, in which city Wagner lived and studied.

653 to *659 (6 are starred) Scenes in Paris where Wagner lived, 1839 to 1842.

*495 to 508 (9 are starred) Scenes in London, where he lived in 1855.

*632 Ludwig's Castle, Neuschwanstein, in Germany, where Wagner lived in royal luxury.

*698 to 702 (4 are starred) Lucerne, Switzerland, near which Wagner spent several years of his life.

*740, 741, *742 Venice, where Wagner died.

Otto Edward Leopold Bismarck, statesman and diplomatist (1815-1898).

*621, 622, 623 Berlin, in which city Bismarck was educated.

*607 to 612 (3 are starred) St. Petersburg, Russia, and surroundings, where he served as Ambassador.

*653 to *659 (6 are starred) Scenes in Paris, where he served as Ambassador.

Francis Joseph I, Emperor of Austria-Hungary (1830).

*751 to *755 (3 are starred) Scenes in Vienna, the birthplace of Francis Joseph and capital city of his empire.

750, *756 to *760 (3 are starred) Other scenes in Austria over which he has ruled so long.

William II, Emperor of Germany (1850).

*621 The Royal Palace, where Kaiser Wilhelm lives, Berlin.

622 Unter den Linden, Berlin, from the Royal Palace.
623 to 637 (10 are starred) Other scenes within the Kaiser's domains.
611 The Empress of Germany driving in Peterhof Park, Russia.

HOLLAND AND BELGIUM

These two countries have a significance in history out of proportion with their small size. From the middle ages on they were the center of flourishing industry and commerce. Holland played an important part in the early colonial history, especially in the Dutch settlement of New Amsterdam (New York). Two men are among the foremost artists of the world, the Dutch painter Rembrandt and the Belgian, Rubens.

Peter Paul Rubens, celebrated Belgian painter (1577-1640).
*638 Cologne, Germany, where Rubens lived as a young boy.
*649 Antwerp, Belgium, where he lived and died.
*740, 741, *742 Venice, where he studied art.
725 to *729 (3 are starred) Rome, in which city also he studied.
*653 to *659 (6 are starred) Paris, to which he was called in 1622 to decorate the Luxembourg.
*676, 677 Madrid, where he was sent on a diplomatic mission.
*495 to 508 (9 are starred) Scenes in London, to which city his mission took him.

Rembrandt Harmenzoon van Ryn, Dutch landscape painter (1606-1669).
*639, *640 Amsterdam, where he studied, worked and died.

*752 Imperial Museum at Vienna, which contains some of his masterpieces.

*656 The Louvre in Paris, which contains some of his works.

SWITZERLAND

Switzerland is a country of exceptional scenic beauty and visited every year by many thousands of tourists. Its place in history is unique, and it has played a part wholly beyond its territorial extent and population. Surrounded on all sides by monarchies, Switzerland has been a republic for over 600 years, and to-day is the most durable federal constitution known in history. The Swiss cling as passionately to their liberties as they love their glorious mountains. The legend of Tell is told in every civilized language. To the Reformation movement in the sixteenth century Switzerland gave two leaders, Zwingli and Calvin. The latter greatly influenced the formation of the religious systems of Holland, England and Scotland (Presbyterianism).

William Tell, traditional Swiss hero.

*701 Lake Lucerne, near where Tell is supposed to have jumped over.

*698, *699, *700, 702 Other scenes around Lake Lucerne.

Huldreich Zwingli, Swiss preacher and reformer (1484-1531).

703, *704 Berne, Switzerland, where Zwingli was educated.

*751 to *755 (3 are starred) Vienna, Austria, where Zwingli later studied.

John Calvin, **Swiss preacher and reformer (1509-1564).**

***653 to *659 (6 are starred) Scenes in Paris, where Calvin studied.**

***716 On Lake Geneva, near where Calvin preached.**

FRANCE

Many are the attractions of this beautiful country with its fine scenery, its splendid cities, its grand cathedrals, and its gay city life. For centuries France was the foremost political power in Europe. In art, literature, and drama the French are still among the leaders, and in fashion Paris sets the pace for the world. The brilliant and many-sided genius of the French appears in the galaxy of famous men in most varied stations in life: warriors, statesmen, writers, churchmen, orators, etc. In Napoleon, France possesses a genius of the first order, a giant among men, though little of stature. Between France and this country there was always a close relation. Frenchmen were among the most daring and most successful explorers in this country, and in the Revolutionary War several French officers achieved distinction in the colonial army.

Charlemagne, **King of the Franks and Emperor of Rome (742-814).**

725 to *729 (3 are starred) Rome and St. Peter's, where Charlemagne was crowned.

Louis IX, **King of France (1215-1270).**

***653 to *656 Paris, where Louis IX ruled France.**

*657 Sainte Chapelle, built by Louis IX in 1245.

*659 The Notre Dame Cathedral in Paris, completed during Louis' reign.

846, 847 Jerusalem, to whose rescue Louis organized a crusade.

*786, 787 Cairo, Egypt, against which he led an expedition.

Joan of Arc (Maid of Orleans), 1412-1431.

662 The Cathedral at Rheims and statue of the "Maid of Orleans."

*663 Inside the cathedral at Rheims where Charles VII was crowned.

Charles VIII, King of France (1470-1498).

*653 to *659 (6 are starred) Scenes in Paris, where Charles ruled France.

*730 Naples, Italy, which was taken by Charles VIII.

Francis I, King of France (1494-1547).

*738, 739 Cathedral at Milan, Italy, which city he conquered.

*653 to *659 (6 are starred) Scenes in Paris, where Francis I reigned.

Jacques Cartier, explorer in America (1494-1552).

652 to *672 (13 are starred) Scenes in France, Cartier's native country.

*366 to *371 (4 are starred) Scenes in Canada along the St. Lawrence, explored by Cartier.

Catherine de Medici, Queen of France (1519-1589).

*736, 737 Florence, Italy, where Catherine was born.

*653 to *659 (6 are starred) Scenes in Paris, where Catherine ruled.

Jean Ribaut, explorer in America (1520-1565).

*672 The beach at Dieppe, France, where Ribaut was born.

*153 Charleston Harbor, S. C., entered by Ribaut.

*159 The wharves at Savannah, Ga., where Ribaut landed in 1565.

162 to *169 (6 are starred) Scenes in Florida, in which state he was killed.

Samuel de Champlain, explorer in America (1567-1635).

652 to *672 (13 are starred) Scenes in France, the land of his nativity.

*364 to 373 (6 are starred) Scenes along the St. Lawrence River explored by Champlain.

Richelieu, Armand Jean du Plessis, Cardinal and statesman (1585-1642).

*653 to *659 (6 are starred) Scenes in Paris where Richelieu was born, and where he directed the destinies of France.

Jacques Marquette, Jesuit missionary and explorer in America (1637-1675).

652 to *672 (13 are starred) Scenes in France, the native country of Marquette.

*69 to *77 (5 are starred) Niagara Falls and surroundings explored by Marquette.

202, *206, *215, *223, *226 Scenes in the northwest explored by Marquette.

*173, *174, 175, *187, *188, *189 Scenes on the Mississippi explored by Marquette.

202 Scene on Lake Michigan near which lake Marquette died.

Louis XIV, King of France (1638-1715).

660 In Versailles, built and occupied by Louis XIV.

658 Gobelins tapestry weaving, an industry fostered by Louis XIV.

*653 to *657, *659 Other scenes in Paris, where Louis XIV ruled.

Robert Cavelier de La Salle, explorer in America (1643-1687).

652 to *672 (13 are starred) Scenes in France, his native country.

*69 to *77 (5 are starred) Scenes around Niagara Falls explored by La Salle.

202, *206, *215, *223 Places of the northwest on the route of La Salle's explorations.

*173, *174, 175, *187, *188, *189 Scenes on the Mississippi River, explored by La Salle.

Francois Marie Arouet (Voltaire), wit, freethinker and revolutionary writer (1694-1778).

*653, *659 Paris, the city in which Voltaire was born and where he died.

*621, 622, 623 Berlin, Germany, in which city Voltaire lived three years as a guest of Frederick the Great.

*716 On Lake Geneva, Switerzland, where he spent much time.

Louis Joseph, Marquis de Montcalm de Sainte-Veran, French general in command at Quebec (1712-1759).

652 to *672 (13 are starred) Scenes in France, the native country of Montcalm.

*369, 370 Quebec, Canada, where Montcalm was killed during the battle.

Jean Jacques Rousseau, author and educational and political reformer (1712-1728).

*653, *654, *655, *656, *659 Scenes in Paris, where he lived many years.

Comte de Mirabeau, Revolutionary orator and agitator (1749-1791).

*653 to *659 (6 are starred) Scenes in Paris, where Mirabeau was a great power during the Revolutionary period.

*495 to 508 (9 are starred) Scenes in London, where he spent some time in 1784-1785.

*621, 622, 623 Scenes in Berlin, where he resided from 1785 to 1786.

Louis XVI, King of France (1754-1793).

660 In the Palace of Versailles in which Louis was born, and where he was mobbed by the revolutionists.

*655 The Champs Elysées in Paris, down which he was marched to the Place de la Concorde in distance.

*657 Palace of Justice, showing where Louis was imprisoned in the Conciergerie, Paris.

*656, *659 Notre Dame Cathedral, which was stormed and sacked when the mob rose against Louis XVI.

*653, *654, *655 Other scenes in Paris.

Marie Antoinette, Queen of France (1755-1793).

*751 to *755 (3 are starred) Scenes in Vienna, where the Queen was born.

660 In the Palace of Versailles, where Marie Antoinette lived and had her garden and chickens.

*656, *659 Notre Dame Cathedral, which played a conspicuous part in Antoinette's time.

*657 The Palace of Justice in Paris, including the Conciergerie where Antoinette was imprisoned.

*655 Looking down the Champs Elysées to the Place de la Concorde, Paris, where Antoinette was executed.

658 Gobelins tapestry, very popular in Antoinette's time.

*653, *654 Other scenes in Paris.

Jean Paul Roch Yves Gilbert Motier, Marquis de Lafayette, celebrated French general, friend of Washington and of American Independence (1757-1834).

*653 to *659 (6 are starred) Scenes in Paris, where Lafayette died.

1 Bunker Hill Monument, where Lafayette officiated at the laying of the cornerstone.

*2 to 9 (5 are starred) Other scenes around Boston visited by Lafayette.

*143 Mount Vernon, where Lafayette visited in 1824 to pay his respects to Washington.

*128 to 139 (8 are starred) Scenes in Washington, where Lafayette was an honored guest in 1824 and 1825.

*29 to *48 (12 are starred) Scenes in New York, which warmly welcomed Lafayette in 1824.

Maximilien Marie Isidore Robespierre, celebrated French Revolutionist (1758-1794).

*655 Looking toward the Place de la Concorde, where Robespierre was executed, Paris.

*653, *654, *656 to 660 (3 are starred) Other scenes in Paris, where Robespierre played so conspicuous a part in the Revolution.

Napoleon Bonaparte, military genius and Emperor of the French (1769-1821).

*653 The Arch of Triumph, built by Napoleon at Paris.

660 The Palace at Versailles, France.

*659 The Notre Dame Cathedral, where he was crowned, Dec. 4, 1804.

*654 to *657 Scenes in Paris entered by the Allies in March, 1814.

*738, 739 Milan's Cathedral, where Napoleon stood on May 15, 1796.

*665, 666 Nice, France, where he assumed command of the army of Italy.

*789 to *795 (3 are starred) Scenes near the Battle of the Pyramids, Egypt.

*844 A market in Jaffa, which city he stormed March 7, 1799.

715 The great St. Bernard Pass, crossed by Napoleon in May, 1800.

*751 to *755 (3 are starred) Vienna, Austria, which Napoleon occupied in December, 1805.

*621, 622, 623 Berlin, entered by Napoleon, October 27, 1806.

*676, 677 Madrid, entered by Napoleon, December 4, 1808.

*687, 688 Seville, Spain, taken by Napoleon, February 1, 1810.

613, 614 Moscow, which he found on fire, September 14, 1812.

*625 Dresden, near where he won his last great victory, August 26 and 27, 1813.

*647, 648 Brussels, near which Waterloo was fought.

689 Cadiz, Spain, besieged by Napoleon in 1810.

Victor Marie Hugo, great French novelist and poet (1802-1885).

*653 to *657 Paris, where Hugo lived and died.

*659 Notre Dame Cathedral, which plays so large a part in Hugo's writings.

*647, 648, *649 Scenes in Brussels and Antwerp, where Hugo spent considerable time.

SPAIN AND PORTUGAL

These two countries were once far more powerful than they are now. Both possessed a vast colonial empire, Spain alone almost all Central and South America, where the Spanish language to this day testifies to the former influence of Spain. Many of the early discoverers were Portuguese or Spaniards, or foreigners in the service of these countries. The Spanish national character exhibits a certain seriousness, almost hardness—perhaps a result of the eight centuries of struggle against the Moors—but at the same time grandeur, chivalry and fondness of adventure. These qualities fitted them for becoming bold explorers and conquerors, and these traits appear in the famous men whose story has so vividly been told by Prescott and others.

Ferdinand V (1452-1516) and Isabella (1451-1504), King and Queen of Spain, backers of Columbus.

*684, *685 The Alhambra Palace at Granada, taken by Ferdinand in 1492.

675 The old aqueduct at Segovia, familiar to Ferdinand and Isabella.

*687, 688 Seville and the Gaudalquivir River, which played so important a part in Ferdinand's time.

*676 The modern Royal Palace of Spain at Madrid.
*730 Naples, where Ferdinand became ruler in 1504.
*325, *423, 424 Some scenes explored by Columbus.

Ponce de Leon, Governor of Porto Rico, adventurer and explorer (1460-1521).

*320 to 326 (4 are starred) Scenes in Porto Rico, of which island he became governor.
162 to *169 (6 are starred) Scenes in Florida, which land he found in his search for the "Fountain of Youth."
*421 to *432 (9 are starred) Scenes in Cuba, where he died.

Francisco Pizarro, Spanish soldier, conqueror of Peru (1471-1541).

674 to *692 (11 are starred) Scenes in Spain, the native land of Pizarro.
327 to *332 (3 are starred) Scenes in Panama, where Pizarro was with Balboa.
*466 Lima, Peru, founded by Pizarro as his capital; also place of death.
462, *463 Quito, Ecuador, taken by Pizarro.
*456 to *461, *464, 465 Other scenes in Ecuador.
474 An old silver mine at Cerro de Pasco that enriched the Spanish.
467 to *473 (5 are starred), *475 to *483 (5 are starred) Other scenes in Peru, subjugated by Pizarro.

Vasco Nunez Balboa, noted sailor and discoverer of Pacific Ocean (1475-1518).

327 to *332 (3 are starred) Scenes in Panama and on the Pacific explored by Balboa.

Fernao de Magalhaes (Ferdinand Magellan), noted sailor and explorer (1480-1521).

693 Lisbon, Portugal, the capital of his native land.
696 Madeira Islands, at which he stopped on his voyage to America.
*451 The harbor at Rio de Janeiro, Brazil, which he entered.

*486 The Straits of Magellan, which bear his name.

349 to *363 (10 are starred) Scenes in the Philippines, which islands Magellan discovered and in which he died.

Hernando Cortez, noted soldier and conqueror of Mexico (1485-1547).

*687, 688 Seville, Spain, near which Cortez died.

*398, *399, *400 In Mexico City and surroundings, taken by Cortez.

401 to 409 (4 are starred), *411 to *416 (4 are starred) Other scenes in Mexico.

*257 to *266 (8 are starred), *269 to *278 (7 are starred) Scenes in Arizona, over which Cortez led his followers.

Fernando de Soto, noted soldier and conqueror (1501-1542).

674 to *692 (11 are starred) Scenes in Spain, the native country of de Soto.

424 to *432 (5 are starred) Scenes in Cuba, where he was governor.

*421, *422, *423 Havana, Cuba, and the harbor from which de Soto sailed for Florida.

*160, 162 to *169 (6 are starred) Modern scenes in Florida and Georgia visited by de Soto.

*170 to 175 (4 are starred) Modern scenes in Alabama, Mississippi and Louisiana.

*187, 188 Scenes on the Mississippi River discovered by de Soto; also his burial-place.

Gonzola Pizarro, Spanish soldier—adventurer and Governor of Quito (1506-1548).

329 to *332 (3 are starred) Scenes in the Isthmus of Panama, seized by Gonzola Pizarro.

*460 to 465 (4 are starred) Scenes around Quito, Ecuador, of which city he was governor.

*483, 484 Cuzco, which city he defended against Almagro, and where he finally died.

481, *482 On Lake Titicaca, where he defeated the Royalist forces of Centeno.

ITALY
(*Ancient Roman*)

The center of ancient and medieval history is the great inland sea called the Mediterranean. By its geographical position—in the very heart of the Mediterranean—Italy seemed to be destined to become the center of the ancient world. Rome became actually the "mistress of the world," but less through its geographical situation than through the character of its people and the greatness of its leaders. The Roman language for a long time was the language of the educated world; Roman law and political institutions were powerful factors in the formation of medieval and modern institutions. Military leaders, orators, statesmen and lawmakers are most conspicuous among the famous men of this imperial race, which was so excellently fitted to rule the world.

Marcus Tullius Cicero, celebrated Roman statesman and orator (106 B. C.-43 B. C.).

*728 The Roman Forum, where were delivered his mighty Philippics.

Gnelus Pompeius Magnus (Pompey the Great), noted Roman general (106 B. C.-48 B. C.).

725 to *729 (3 are starred) Rome, his native city.

775 Battlefield of Pharsalus, where he was defeated by Cæsar.

*786 to *795 (4 are starred) Scenes around the Pyramids of Egypt in which country he was murdered.

Caius Julius Cæsar, great Roman general, statesman and imperator (102 B. C.-44 B. C.).

*728 The Roman Forum and place where Cæsar fell.

725, *726, 727, *729 Other scenes in Rome.

775 Battlefield of Pharsalus, Greece.

Marcus Porcius Cato, distinguished Roman censor (234 B. C.-149 B. C.).

*728 The Roman Forum, where Cato was a great power in his day.

Marcus Junius Brutus, Roman politician, one of the assassins of Cæsar (85 B. C.-42 B. C.).

*728 Overlooking Roman Forum and the spot where Brutus stabbed Cæsar.

725, *726, 727, *729 Other scenes in Rome, the native city of Brutus.

Mark Antony, Roman triumvir and general (83 B. C.-30 B. C.).

725 to *729 (3 are starred) Scenes in Rome, the native city of Antony.

*786 to *795 (4 are starred) Scenes in Egypt, where he met Cleopatra and where he finally died.

775 The battlefield of Pharsalus, Greece, where Antony commanded left wing of Cæsar's army.

Caius Julius Cæsar Octavianus Augustus (Augustus), first Roman Emperor (63 B. C.-14 A. D.).

*728 The Roman Forum.

725, *726, 727 Other scenes in Rome.

Titus Livius (Livy), great Roman historian (59 B. C.-17 A. D.).

725 to *729 (3 are starred) Scenes in Rome, where he lived most of his life and of which he wrote the history.

Tiberius Claudius Nero Cæsar (Tiberius), Emperor of Rome (42 B. C.-37 A. D.).

725 to *729 (3 are starred) Rome, where Tiberius ruled.
674 to *692 (11 are starred) Scenes in Spain, where he served.
853 Tiberias in Palestine founded in reign of Tiberius and named after him.

Titus Flavius Sabinus Vespasianus (Vespasian), Emperor of Rome (9 A. D.-79 A. D.).
*728 The Roman Forum and Temple of Vespasian.
725, *726, 727 Other scenes in Rome.
*786 to *795 (4 are starred) Scenes in Egypt, Africa, of which he was governor.
847 Jerusalem, the siege of which was begun under his command.
*729 The Roman Coliseum, which he began to build but did not finish.

Marcus Ulpius Trajanus (Trajan), Emperor of Rome (53 A. D.-117).
725 to *729 (3 are starred) Scenes in Rome.
675 Old aqueduct built by Trajan in Segovia, Spain.
*857, *858 Damascus, which he incorporated.

Publius Aelius Hadrianus (Hadrian), Emperor of Rome (76 A. D.-138).
725, 727, *728, *729 Scenes in Rome, where Hadrian was born and ruled.
*726 Rome and Hadrian's tomb (now Castle of San Angelo), from the Dome of St. Peter's.
847 Jerusalem, on whose site he planted Aelia Capitolina.

Constantine the Great (Gaius Flavius Valerius Aurelius Claudius Constantinus), Emperor of Rome (288 A. D.-337).
*728 The Roman Forum and arch of Constantine.
725, *726, 727, *729 Other scenes in Rome.
*777 to *782 (3 are starred) Constantinople, which he founded on the Bosphorus.

(*Medieval and Modern*)

After the collapse of the Roman empire, Rome and Italy continued to have a leading part in the development of civilization. Rome was the center of attraction for all the nations of Western Christendom throughout the middle ages, and remains the seat of the Pope, the head of the Catholic Church. From the middle ages on, the Italians distinguished themselves in literature and art. No other nation has as many painters of renown as Italy, only a few of the very greatest being mentioned in this list.

Marco Polo, celebrated traveler, geographer and writer (1254-1324).

*740, 741, *742 Venice, where he was born and where he lived.

927 to *943 (7 are starred) Scenes in China, where Polo traveled with his father.

Dante Alighieri, great Florentine poet (1265-1321).

*736, 737 Florence, the native city of Dante.

725 to *729 (3 are starred) Rome, where he spent some time.

*740, 741 Venice, where he had been on a mission and was returning when he fell ill.

*653 to *659 (6 are starred) Scenes in Paris, where he is supposed to have studied.

Giovanni Boccaccio, Renaissance writer and interpreter of classical literature (1313-1375).

*736, 737 Florence, his adopted home city.

*729 Naples, where he settled for a short time.

Giotto di Bondone, celebrated Florentine sculptor and artist (1267-1337).

*736 Florence, where he lived and worked.

737 The great Duomo at Florence and bell tower which he created.

725 St. Peter's at Rome, which contains some of his work.

Donato di Niccio di Betto Bardi (Donatello), Florentine sculptor (1386-1466).

*736, 737 Florence, in which he lived and worked.

Christopher Columbus, discoverer of America (1446-1506).

*738, 739 The Cathedral at Milan, Italy, which stood less than 100 miles from Genoa.

*684, *685 Granada and the Alhambra Palace, Spain.

*687 Seville and the Guadalquivir River, Spain.

693 Lisbon, Portugal.

*421 to *427 (5 are starred) Scenes in Cuba, where Columbus visited.

*325 Columbus' first landing-place in Porto Rico.

*320, 322, *323, 324 Other scenes in Porto Rico.

*440, *443 On coast of Venezuela, touched by Columbus.

*417, *419, *420 In Costa Rica, where Columbus paid a visit.

Lorenzo de Medici, Florentine statesman and patron of art (1449-1492).

*736, 737 Florence, the city over which he ruled.

Girolamo Savonarola, preacher, reformer and educator (1452-1498).

*736, 737 Florence, the city of Savonarola and the Plaza de Vecchio, where he was executed.

Leonardo da Vinci, celebrated painter (1452-1519).

*738, 739 Milan, Italy, where he spent considerable time.

*736, 737 Florence, where he also stayed for a time.

725 to *729 (3 are starred) Rome, where he lived in 1514 and 1515.

*656 The Louvre at Paris, which contains the famous "Mona Lisa."

Michelangelo Buonarroti (Michelangelo), great sculptor, painter and architect (1475-1564).

*736, 737 Florence, where he studied and where much of his best work was done.

727, *728 Rome, where he did much of his best work.

725 St. Peter's Church, which shows so much of his genius.

*726 Looking over Rome from the great Dome of St. Peter's, built by Michelangelo.

*656 The Louvre in Paris, which contains some of his work.

*740, 741, *742 Venice, to which he fled in 1529.

*734, 735 The Carrara quarries developed by Michelangelo.

Tiziano Vecelli (Titian), celebrated Venetian painter (1477-1576).

*740, 741, *742 Venice, the city of Titian.

725 to *729 (3 are starred) Rome, where he met and studied with Michelangelo and Raphael.

*752 Vienna, Imperial Museum where are some of his great works, "Ecce Homo," etc.

*656 The Louvre at Paris, which contains his "Entombment of Christ."

*625 The Zwinger at Dresden, which contains his "Tribute Money."

*736, 737 Florence, where some of his finest work is to be found.

Raphael Sanzio, great painter and sculptor (1483-1520).

*736, 737 Florence, where much of his earliest work was done.

725, *726, 727 St. Peter's and the Vatican at Rome, which bears so many evidences of his genius.

*647, 648 Brussels, Belgium, where he worked for a time.

*738, 739 The great Cathedral at Milan, which contains some of his masterpieces.

*656 The Louvre of Paris, which contains some of his work.

Guiseppe Garibaldi, great Italian patriot and soldier (1807-1882).

*665, 666 Nice, France, the birthplace of Garibaldi.
*492, *493, *494 Scenes in Montevideo, where Garibaldi lived for some time.
*29 to *48 (13 are starred) Scenes in New York City, where he became a citizen of the United States and near which he lived.
*743 to *749 (4 are starred) Palermo and other places in Sicily brought under his control.
725 to *742 (10 are starred) Scenes in Italy, which it was his aim to unite and solidify.

Victor Emmanuel II, First King of Italy (1820-1878).

*665, 666 Nice was ceded to France by Victor Emmanuel in 1860.
725 to *729 (3 are starred) Rome, which he occupied in 1870, thus uniting Italy.

Pope Pius X, the Ruling Head of the Catholic Church (1835-1914).

*740, 741, *742 Venice, near which city he was born and of which he was Patriarch.
725, *726, 727 St. Peter's, and the Vatican where the Pope resides and from which he rules the Catholic Church.

GREECE AND MACEDONIA

There is a striking contrast between the character of the Greeks and Romans. It has been well expressed by the Roman poet Virgil (Æneid, VI), who says that others, namely the Greeks, surpass in art, in eloquence and literature, but Rome's mission was to rule mankind with powerful sway. In truth, here we have the special features, artistic and intellectual, that attract us to the Greeks, notably the Athenians. There were among them celebrated warriors and statesmen—one of the very greatest in

history, Alexander—yet the word Greek usually conjures up other visions. It places before our eyes great artists, poets, orators, philosophers, whose works have served as models and inspirations for all succeeding ages.

GREECE

Agamemnon, brother of King Menelaus and Spartan leader in the expedition against Troy.

770 Agamemnon's Council Chamber in Mykenæ, Greece.

Homer, great epic poet.

839 Smyrna, one of the cities which claimed to be his native place.

770 Agamemnon's Council chamber, from which he went forth to humble Troy.

Miltiades, Athenian general and hero of Marathon (died about 489 B. C.).

762 to *767 (4 are starred) Athens, the city of Miltiades.

*768 Battlefield of Marathon, Greece, where Miltiades won the great victory over the Persians.

Leonidas, King of Sparta and hero of Thermopylæ (died 480 B. C.).

*771 Modern view of Sparta, city of Leonidas.

774 The Battlefield of Thermopylæ, where Leonidas was in command.

Aristides, "The Just"—great Athenian statesman (died 468 B. C.).

762 to *767 (4 are starred) Modern scenes in Athens, the city of Aristides.

*761 Looking from Lykabettos toward Salamis in the distant right, where he fought.

*768 The Battlefield of Marathon, where he fought.

Themistocles, Athenian statesman (b. latter part of 6th century; d. about 450 B. C.).

*761, *764 Athens and Piræus, which he was most instrumental in fortifying.

773 Delphi, from which he procured assistance of an oracle to create the navy.

*771 Site of ancient Sparta, where Themistocles was a self-appointed commissioner.

770 Mykenæ, to which he one time fled.

762 to *767 (4 are starred) Scenes in Athens, the city of Themistocles.

Pericles, brilliant and celebrated Athenian statesman (498 B. C.-429 B. C.).

*761 Overlooking modern Athens and ancient Acropolis—to Piræus in the distance.

762, 763, *764, *767 The ancient Acropolis and the Parthenon completed by Pericles.

*765, *766 Views from the Acropolis, which Pericles made the center of all that was finest in art and culture.

Socrates, great philosopher (470 B. C.-399 B. C.).

*761 to *767 (5 are starred) Scenes in Athens, the city of Socrates.

Alcibiades, brilliant and noted statesman (450 B. C.-404 B. C.).

*761 to *767 (5 are starred) Modern views in Athens, the city of Alcibiades.

*771 Site of ancient Sparta, to which city Alcibiades once joined himself.

745 Syracuse, Sicily, against which he led an expedition.

*777 to *782 (3 are starred) Constantinople, on site of ancient Byzantium conquered by Alcibiades.

Plato, distinguished philosopher (429 B. C.-347 B. C.).

*761, 763, *764 Scenes in Athens, city of Plato.

*785 to 804 (11 are starred) Scenes in Egypt, where Plato traveled widely.

745 Syracuse, Sicily, where he was taken prisoner by Dionysius.

Xenophon, Athenian general and historical writer (430 B. C.; died after 354 B. C.).

*761 to *767 (5 are starred) Athens, the city of his birth.

*771 Sparta, with which city he joined himself in battle of Coronea.

Aristotle, celebrated philosopher (384 B. C.-322 B. C.).

*761 to *767 (5 are starred) Modern scenes in Athens, where Aristotle studied under Plato.

Demosthenes, great orator (384 or 385 B. C.-322 B. C.).

*761, 763, *764 Looking over Athens to the Pnyx, where Demosthenes was often heard.

762, 765, *766, *767 Other modern scenes in Athens, the city of Demosthenes.

MACEDONIA

Alexander (The Great), Macedonian General and King (356-323 B. C.).

*786 to 800 (8 are starred) Scenes in Egypt, which he conquered.

*761 to *776 (8 are starred) Scenes in Greece, where he conquered.

AFRICA

EGYPT

The land of the Nile with its long history, its mysterious buildings and peculiar civilization, has a special fascination for the students of history. "Builders of pyramids and temples" is the name rightly given to the great men who in ancient times ruled over this country.

Khufu (Cheops), King of Egypt—builder of pyramids (about 2700 B. C.).

*789 to *799 (7 are starred) Khufu's tomb and scenes in Egypt intimately associated with him.

Rameses II, King of Egypt and builder of Temples (about 1350-1280 B. C.).

804 The great temple at Abu Simbel and statues of Rameses, Egypt.

*785 to *803 (11 are starred) Other scenes in Egypt.

Ptolemy I (Soter), King of Egypt (died 283 B. C.).

*789 to *799 (7 are starred) Scenes in Egypt, where Ptolemy ruled.

Cleopatra, Queen of Egypt—consort of Cæsar and Antony (69 B. C.-30 B. C.).

*789 to *799 (7 are starred) Scenes in Egypt, where she ruled.

725 to *729 (3 are starred) Scenes in Rome, where she lived for a time with Julius Cæsar.

ASIA

BABYLONIA

One of the most ancient seats of civilization which now enlists the interest of the whole world more than ever before on account of the discoveries of ruins, cuneiform inscriptions, etc. The most famous Babylonian monarch was Nebuchadnezzar.

Nebuchadnezzar, King of Babylonia (reigned 605-562 B. C.).

873 Ruins of Nebuchadnezzar's Palace, site of ancient Babylon.

846, 847 Jerusalem, which he conquered.

*785 to 804 (11 are starred) Egypt, which he invaded.

*875, *876 Scenes along the Euphrates River near Babylon.

PERSIA

The greatest political and military struggle of the Greeks was against the vast armies of Persia, which was then a great world power. This struggle forms the most brilliant period of Greek history, and we see the Greek heroes, Leonidas, Miltiades, Themistocles, defeating the armies of the Persian monarchs, Darius and Xerxes. It was then proved, as so often since, that not the size of the armies but the quality of the soldiers is of paramount importance in war.

Darius I, King of Persia (521 B. C.-486 reigned).
*768 Marathon battlefield, Greece, where Darius was defeated.

Xerxes I, King of Persia (519 B. C.-465 or 464 B. C.).
774 Thermopylæ, where Xerxes attacked Leonidas, Greece.
*761 to *767 (5 are starred) Athens, which he burned.

PALESTINE

Few lands are so well known, so familiar to the minds and so dear to the hearts of millions of men as Palestine, the home of the Hebrew race and religion, and the cradle of Christianity. The Hebrew race is a remarkable one, in many regards unique. Its ancient heroes, patriarchs, kings and prophets were, above all, religious heroes. Their example of faith and religious enthusiasm has been a source of inspiration for thousands of years.

Abraham, Hebrew patriarch (flourished about 2000 B. C.).

843 Relief map of the land claimed by Abraham.

847 Overlooking Jerusalem and Mount Moriah, where Abraham sacrificed.

848, *859, *863 Nomadic life in Palestine and Syria.

*855 The springs at Dan, where Abraham pursued the "Four Kings of the East."

841, *842 Oases in Sinai.

*789 to *799 (7 are starred) Scenes around the Pyramids of Egypt that must have been familiar to Abraham.

873 to *876 (3 are starred), 878 to 882 (2 are starred) Scenes along the Tigris and Euphrates Rivers.

Joseph, Hebrew ruler in Egypt.

848 A caravan on the road over which Joseph traveled.

852 The Plain of Dothan and traditional Joseph's well.

*796 Overlooking the desert from top of a pyramid—showing the "river of Joseph," Egypt.

*797, *798, *799 Irrigation and farming on the Nile.

*789 to *795 (3 are starred) The Pyramids and Sphinx, so familiar to Joseph.

Moses, the Hebrew lawgiver, general and statesman (about 1500 B. C.).

*789 to 804 (9 are starred) Scenes in Egypt, the foster land of Moses.

840 The Mount of Moses in the Sinai Wilderness.

841, *842 Oasis of Elim, where the Israelites found water.

*844 to 854 (2 are starred) Scenes in the land to which Moses led his people.

843 Relief map of Palestine.

Joshua, great Hebrew general and prophet (after 1500 B. C.).

843 Relief map of Palestine and the country taken by Joshua.

852 The Plain of Dothan.

Elijah, great Hebrew prophet (of 9th Century B. C.).

*844 Men in the Jaffa market wearing the same kind of mantle as Elijah cast upon Elisha.

Saul, first King of the Jews (11th Century B. C.).

852 The Plain of Dothan, where Saul sought his father's asses.

849 Wilderness of the Scapegoat, where Saul sought David.

David, the musician and second King of the Jews (11th Century B. C.).

846, 847 Jerusalem, the city of David.

849 Wilderness of the Scapegoat, where David hid from Saul.

Solomon, the wise King of the Jews and builder of the Temple (10th Century B. C.).

847 Overlooking the site of Solomon's Temple at Jerusalem from Mount of Olives.

872 The Cedars of Lebanon, such as were used in the Temple.

846 Street scenes in Jerusalem, the city of Solomon.

Judas, the Maccabee, Hebrew patriot and defender of his country (died 161 B. C.).

846, 847 Jerusalem, city of the Maccabees, which they defended.

Flavius Josephus, Hebrew historian (35 A. D.—about 95).

853, 854 Scenes in Galilee, where he was Governor.

846, 847 Street scenes in Jerusalem, which he helped defend and of whose fall he has written.

725 to *729 (3 are starred) Rome, where he spent the last years of his life.

ARABIA

The Arabs, like the Hebrews, are a branch of the Semitic family of nations. The most celebrated man of the Arabic race is Mohammed or Mahomet, the founder of the religious system called Islam or Mohammedanism. The story of the struggle be-

tween the followers of Mohammed and the Christians of Europe occupies a central place in history for centuries, and reached a climax in the Crusades, so full of brilliant and thrilling events.

Mahomet or Mohammed, religious teacher and founder of Mohammedanism (about 570-632).

848 A Syrian caravan such as he accompanied when a boy to Syria.

*899, 900 The Taj Mahal in Agra, India.

902, *903 The great Mosque "Jumma Musjid" at Delhi, India.

*786, 787, 788 Mohammedanism in Cairo, Egypt.

*777 to *782 (3 are starred) Mohammedanism in Constantinople, Turkey.

*805 to 808 (2 are starred) Mohammedanism in Algiers.

*684, *685 Mohammedan architecture in Spain.

THE FAR EAST: INDIA, CHINA AND JAPAN

Two other founders of religious systems appeared in the East: Buddha in India and Confucius in China. After having been a monarchy for several thousands of years, China has now become a republic and its statesmen are trying to modernize the ancient empire. A similar process of modernization was begun some decades ago by Japan, and this country has developed wonderfully in recent times. Since the Russo-Japanese War, Japan has become a great power in industrial and political life. Among its great men are several distinguished generals and statesmen.

INDIA

Gautama (The Buddha), philosopher and religious teacher (middle of 6th Century B. C.).

*897 A banyan tree (the sacred Bo-tree) in India.

898 Benares, where the Buddha began to preach.

*883 to 896 (7 are starred), *899 to *906 (4 are starred) Other scenes in India, where he lived and taught, showing present influence.

909 Towering images of the Buddha in Pegu, Burma.

*910 Pagodas treasuring copies of Buddhist scriptures at Mandalay, Burma.

911 Splendid honors to a dead Buddhist at Mandalay, Burma.

*966 Yasaka Pagoda at Kyoto, Japan.

999 Boro Boedeor, the most remarkable and magnificent monument Buddhism has ever erected.

CHINA

Confucius, philosopher (552-479 B. C.); *Li Hung Chang,* statesman (1822-1901); *Yuan Cha Kai,* first president.

927 to *943 (7 are starred) Scenes in China, the land of Confucius, Li Hung Chang and Yuan Cha Kai.

JAPAN

Count Shigenobu Okuma, leading statesman of Japan (born 1837).

*962 Inside Count Okuma's home at Tokyo, Japan.

959, *960, *961 Scenes in Tokyo, where Okuma lives.

General Baron Nogi, great general and hero of Port Arthur (born 1849).

954 to 978 (16 are starred) Scenes in Japan, the native country of Gen. Nogi.

*946 to 953 (3 are starred) Scenes of the Russo-Japanese War, of which Nogi was the hero.

As was said above, it may prove very useful occasionally to review the lives of great men according to special classifications or categories. Instead of invariably announcing the subject by the stereotyped phrases: "To-day we shall see the famous generals," or "Now let us study the lives of great poets," the teacher should find more specific and interesting titles. The following may serve as examples:

Sailing with the discoverers:
Columbus, Vespucci, Magellan, etc.

Traveling with the explorers in North America:
Ribaut, Champlain, Marquette, Fremont, etc.

A day with the early settlers:
Miles Standish, Winthrop, Endicott, Penn, etc.

Great men I saw during the War of the Revolution:
Washington, Adams, Prescott, Paul Revere, Warren, etc.

With famous generals on the battlefields of the world:
Washington, Warren, Lafayette, Alexander, Cæsar, Pompey, Napoleon, Moltke, etc.

Presidents of the United States I would have liked to meet in Washington:
Lincoln, Grant, Cleveland, McKinley, Roosevelt, Wilson, etc.

Ideals of patriotism:
Washington, Jefferson, Lincoln, etc.

Men of different races who have become famous for United States,
Columbus, Penn, Marquette, Washington, Schurz, Riis, Straus, Carnegie, etc.

An American boy (girl) at the courts of famous kings (queens):
Let the students suggest them.

Where I could have watched the work of great inventors:
Gutenberg, Fulton, Wright, Edison.

With kings of finance and captains of industry:
Armour, Carnegie, Rockefeller, Morgan, Straus.

Where I could have walked with great poets:
Homer, Dante, Goethe, and see English and American poets.

Listening to the greatest orators of the world:
Demosthenes, Cicero, Webster, O'Connell, Burke, Bryan, etc.

Sitting at the feet of celebrated philosophers:
Socrates, Plato, Aristotle, Albertus Magnus, Bacon, Mill, Emerson, etc.

Enjoying the music of great composers:
Mozart, Beethoven, Wagner.

Reading the works of the best novelists:
Scott, Dickens, Thackeray, Harte, Hawthorne, Sienkiewicz, etc.

With the scientists:
Albertus Magnus, Newton, Davy, Muir, Audubon, Huxley, Tyndall, Darwin, etc.

With my favorite authors:
Let pupils suggest.

In the school of great educators:
Ascham, Armstrong, Longfellow, Lowell, Eliot, Wilson, etc.

Studying the works of great artists:
Rubens, Rembrandt, Giotto, Raphael, Michelangelo, Titian, Saint Gaudens, etc.

Men who rose from humble conditions to positions of power:
Lincoln, Carnegie, Riis, etc.

Saddening scenes:
Execution of Mary Stuart, of Marie Antoinette, Louis XVI, etc.

Famous women in history:
Joan of Arc, Queen Elizabeth, Mary Stuart, Cleopatra, Maria Theresa, Marie Antoinette, Catherine de Medici.

Some inspiring scenes in lives of famous persons:
Let students find them.

Similar classifications can be made. When the topic has been chosen and placed before the pupils the teacher should not always tell the names of the great men or women, but should rather ask the pupils whom they consider as belonging to that category. In this way the teacher will find out how much the students know, and, besides, this method will create unusual interest and will stimulate self-activity on the part of the pupils.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

BOTANY

BY

ELLIOT R. DOWNING, Ph.D.,

ASSOCIATE PROFESSOR OF NATURAL SCIENCE, THE UNIVERSITY OF CHICAGO, THE SCHOOL OF EDUCATION, EDITOR OF THE NATURE STUDY REVIEW.

271 STEREOGRAPHS OR SLIDES WITH 354 REFERENCES TO THEM

The subjects here listed from the 1,000 series will be of interest to students of botany. No attempt has been made to make the classification complete; it is only suggestive. Other material along this line will be found under the classifications of "Zone Life" and "Agriculture."

Publishers' Note.

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations for *Nature Study* the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

PLANTLESS AREAS

Due to salt impregnation of the soil, dryness, cold, heat, lack of soil or rapid soil movements: *10, 11, 14, *273, *347, *389, *438, *476, 480, 541, *620, *668, *672, *699, *731, 793, 976.

PLANT AND ANIMAL RELATIONS

Animals dependent on plant food, *864.

It is in the jungle (*818, 825) where the cover is abundant that animals are most numerous. In such regions as are without abundant cover like 260, *273, *792, 793, animal life is scanty. Such as exists must be adapted to the conditions. Thus the donkey can live on the prickly desert vegetation (*403, 405), and the reindeer thrives on the scanty mosses (*582).

PARTS OF A FLOWERING PLANT

*168, 511, *897.

STEMS

Annual, 152, *193.
Perennial, 26, *149, *355.
Monocotyledonous, 152, *182, *200, *934.
Dicotyledonous, *108, 511, 534.
Polycotyledonous, *166, *383, *553.
Endogenous, *200, *343, *434.
Exogenous, 298, 550.
Excurrent, *149, 382, *383.
Deliquescent, *2, 26, 552, *929.
Climbing stems, 998.
Underground, 59, *743.

Stem distorted by wind, 275, 479.
Strength of stem—buttresses, *929, *293.
Stem hollow, still growing, 934, *293.

LEAVES

Parts of, petiole, blade, etc., *419, *420.
Nodes and internodes, 322.
Parallel veined, *344, *431, *816.
Net veined, *108, *281, *419, *431, 534.
Simple, *419, *420, 534.
Compound—pinnately, 9, 552.
palmately, *279.
Shapes— needle-like (acicular), 8, *553.
linear, 163, *323.
lanceolate, *281, *365.
ovate, *431.
deltoid, *380.
elliptical, *420, 825.
orbicular, 373.
Margin— entire, *431.
crenate, *108
repand, *419.
sinuate, 401.
lobed, 141, *420, *431.

LEAF ARRANGEMENT

Alternate, *108, *420.
Clustered, *149, *404, *553.

USE

In the above outline a good deal of space is occupied in referring to illustrations of technical terms —an amount quite disproportionate to their relative importance. Such technical terms are of value

in so far as they lead to accurate conceptions which are of use in interpreting the functional activities and relationships of plants. The stereographs which follow are of the sort that should be used most frequently for illustration. So, throughout, where technical botany is illustrated, it should be understood that it is only as a means to an end.

Floating type, 373.
Xerophytic swamp types, 152, 163.
Xerophytic dry soil types, *238, *270, *271, *404, *768, *855.
Deciduous plants, 26, *108, *818.
Evergreen, 163, *166, *282, 872.

STEM AND LEAF

Adjustment to light, 65, 163, *549, 550, *855.
  Leaf mosaics, 65, 515, 536.
Storage in stem and leaf.
  Agave, 141, *404. Cactus, 405, 848. Potato, 59. Garlic, *743.
Self-pruning, 239.

ROOTS

Soil roots, *293, *929, *964.
Aerial roots, 401, *818, 998.
Effects of roots on soil.
  Loose unbound soil showing rapid erosion, *273, 382, *460.
  Partially bound, 239, 251, 664.
  Well bound, *108, *201, *417, *578.

FLOWERS SHOWING DETAILS OF PARTS

*168 Apetalous, asepalous flowers clustered in compound spadix protected by spathe.
*279 Supernumerary petals.

*281 Polypetalous flowers in cymes.
544 Flower cluster a head.
*961 Flower clusters are umbels.
84 Compositæ. Both disc and ray flowers are evident.
533, 534 Clusters are cymes.

FRUIT FORMING FROM FLOWERS

Fruits— Berry, *280, *434, *691, *744.
Drupe, *168, *817.
Caryopsis or grain, *376, *601, *955.
Achene, *366.
Compound fruit, *323.

Seed dispersal, *366.

SPORE-BEARING PLANTS

Algæ—in debris on shore, 14, 541.
Lichens, 14, *80, 202, 536, *582, 583.
Mosses, 536, *582, 583, *593.
Ferns, *343, 536, 564.

IMPORTANT FAMILIES OF SEED BEARING PLANTS

GYMNOSPERMS

Pinaceæ.

Pinus banksiana	scrub pine, 373.
Pinus clausa	sand pine, *166.
Pinus contorta	lodgepole pine, *271.
Pinus edulis	pinon pine, 242.
Pinus lambertiana	sugar pine, 298.
Pinus palustris	southern pine, *149.
Pinus pinea	umbrella pine, 733.
Pinus resinosa	red pine, *223.

Pinus sylvestris Scotch pine, *601, *609.
Pinus strobus white pine, *10.
Picea—spruce.
Picea canadensis, 8.
Picea engelmanni, 372, 382, *383, *384.
Abies balsamea—balsam fir, *593.
Larix—larch, *553.
Thuja—cedar.
Thuja occidentalis (white), *49, *108.
Juniperus virginiana (red) cedar, *107.
Sequoia washingtoniana, *294, 295, *296, *297.

USE

Perhaps this family of the Pinaceæ will serve as well as any of the material illustrated in the stereographs or slides to give the pupil a clear notion of the fact that a family is a group of closely related genera. The specimens of pine which can be seen are sufficiently numerous to give a clear idea of a genus, and their habits of growth are distinct enough to make evident in most cases the basis for specific distinctions. This same genus, Pinus, will serve as fair material for the discussion of geographical distribution.

ANGIOSPERMS

MONOCOTYLEDONES

Gramineæ.
Bamboo, *934, *967.
Meadow grasses, *56, *201, 217, *483, *543, 544, *600, *609, *831, *987.
Grains,

Barley (Hordeum sativum), 630.
Corn (Zea mays), *193.
Millet (Panicum miliceum), *955.
Oats (Avena sativa), *601.
Rice (Oryza sativa), *181, *182, 183, *920.
Wheat (Triticum sativum), *309, *376.

Cyperaceæ—sedges, 152, *182, *842, 877.

Palmaceæ—palms, 163, 429, *818, *926, 950.
Cocos—cocoanut palm, *167, *168, 324, *343.
Phœnix—date palm, *686.

Bromeliaceæ.
Ananas sativus—pineapple, *323.

Typhaceæ. Cat tails, 163, 373.

Juncaceæ—rushes, 152, *842.

Musaceæ—banana family.
Musa sapientum—banana, *434.

DICOTYLEDONES

Salicaceæ—willow family.
Populus—poplar, 202, 374, 664.
Salix—willow, *365.

Cupuliferæ—oak family.
Betula—birch, *77, 146, *600.
Quercus—oak, *681.
Castanea—chestnut, *108.

Ulmaceæ—elm family.
Ulmus—elm, *2, 26, *571.

Moraceæ—mulberry family.
Cannabis—hemp, *355, *361, *363.
Humulus—hop, 630, *992.
Maclura—osage orange, 217.

Morus—mulberry, *864, 867.
breadfruit, *420.

Rosaceæ—rose family.
Pyrus—mountain ash, *366.
apple, 534.
Rosa—roses, *279, 511, *549.
Prunus—cherry, *961.

Leguminosæ.
Gleditsia—locust, 9.

Linaceæ—flax family.
Lunum—flax, 641.

Rutacea—rue family.
Citrus aurantium—orange, *279, *280.
Citrus medica—lemon, *744.
Citrus medica—citron, 433.

Euphorbiaceæ—spurge family.
Hevea—India rubber tree, *411.

Vitaceæ—vine family.
Vitus—grape, *661, *691.

Sterculiaceæ—silk-cotton family.
Theobroma cocoa—cocoa tree, *419.

Theaceæ.
Theasinensis—tea, *973.

Cactaceæ—cactus family, 405, 848.

Solanaceæ—nightshade family.
Solanum—potato, 59.
Nicotiana—tobacco, *431.

Rubiaceæ—madder family.
Coffee arabica—coffee, *817.

PLANT ASSOCIATIONS (*Ecology*)

THE XEROPHYTIC ASSOCIATIONS

The Rock Ledge Society, 14, *80, 227, *291, 480, *518, 603.

The Dry Plains Society, *238, *271, *403, 405, *460, 810.

The Sand Dune Society, *10, 11, *513, *672, *692, 793, 848.

THE HALOPHYTIC ASSOCIATIONS

The Salt Marsh Society, 152, *620, *668.

THE MESOPHYTIC ASSOCIATIONS

The Ravine Society, 65, *76, 146, *164, 536, 772, 837, 913.

The Meadow Society, 84, 239, *483, *543, 544, *600, 664, *724, *758, *831, *987.

The Pure Conifer Forest, *818, 825, 998.

The Mixed Conifer and Deciduous Forest, *108.

The Pure Deciduous Forest, 552.

The Evergreen Tropical Forest, *818, 825, 998.

THE HYDROPHYTIC ASSOCIATIONS

The Marsh Society, *842, 877.

The Pond and River Society, 163, 373, 552.

For tree list and *Forestry* and for *Agriculture* see under Nature Study by the same author.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

CHILD LIFE

EDITED BY

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112 STEREOGRAPHS OR SLIDES WITH 112 REFERENCES TO THEM.

These travel studies through the stereoscope and in lantern slides give the children of our own country delightful chances to see real children of other countries at work and at play, at home and at school.

All teachers know that the "life" element adds for children, even more than for grown folks, just the spark of interest needed to kindle desire for knowledge. To see the boy and girl pushing a cart up an Austrian hill (758) may do more than all the teacher's exposition to make the Austrian Alps and their fertile valleys real places. To see the woolly-haired youngsters picking coffee in the blazing sunshine of an East African plantation, with that snow-capped mountain showing in the distance (817), may help establish the puzzling fact that a snow-capped mountain can hold its snow even under an equatorial sun. To see the Breton children gather-

ing salt from evaporation beds on the coast of France (668) may make American children in inland towns remember what a text-book paragraph fails to clinch about the origin of salt.

Characteristic to a gratifying degree are the kinds of play or other amusement to be observed among children in foreign lands. British schoolboys can be met on a tramp over breezy hills (524) or frolicking at the seashore (514). Dark-skinned little folks watch gay street processions in Burma (911), and wonder at the performances of snake charmers in India (894). Avenues of blossoming trees appeal to the young people of Japan (961).

Community of interest, as we all know, helps toward acquaintance. The boy or girl who finds Esquimaux children (395) and Lapp children (593) having dogs for pets will naturally think of those Northerners in a more friendly and intimate way than would be probable without some such bond of sympathy. The very fact that children in most countries go to schools of some kind is another point where a common interest brings strangers nearer together. The demure little girls at Manila (354) and the bright-faced boys of the Punjab (884) are felt to share, in a certain sense, the routine of American school life.

Children are naturally more interested in the dress of other children than in adult costume. They

will notice, without being directed, peculiarities of Scandinavian dress (600, 601) and the Oriental fashions of Korea (981) or Palestine (848, 851). They will need nobody's comments to help them to infer the differences in the civilization of the lands where the French boys (672) and Australian boys (983) are dressed, and that where the Java (997) and Samoa children (348) go about in careless and scanty clothing.

The children in other lands have much to tell our own children.

Written work on topics suggested by the teacher will make this evident. Topics like the following are likely to lead to careful observation and to original thinking: How African boys help raise coffee. How French children work at the seashore. A street show that boys see in Calcutta. My dog's home and an Esquimaux' dog's home. Good points about school life in India.

Since the time allotted a pupil for the study of a single stereograph in class use is necessarily very short, the pupils should be given some directions as to what to look for in order to make the best use of their limited time. In the stereograph, a pupil is confronted with such a wealth of detail that, without some directing, he may spend the short time in observing things of lesser at the expense of those of greater importance. Such an outline as the fol-

lowing, put on the board in whole or in part, or modified according to circumstances, has been found of practical value as a guide to the pupils, and adds definiteness to their study.

OBSERVATION OUTLINE

I. *General Appearance of Type Studied.*

II. *Clothing.* What? Different articles studied with reference to the material used, manner of wearing, and purpose as compared with our own. How obtained?

III. *Home.*

1. Environment. Description of the country.
2. The House. Kind, where and how built, materials used, number and arrangement of rooms, provisions for cleanliness and health.
3. Furnishings and utensils. What, how made, how used?
4. Foods. Kinds used, how procured, how prepared, how served, the relations of food and health.
5. Family life. Customs and manners, relations of parents and children, duties of each.

IV. *School.* Purpose of, teachers, materials and utensils used, time spent.

V. *Social Life.* Festivals, games, markets, feasts, entertainments.

VI. *Industrial Life.* Occupations. What, how carried on.

VII. *Religious Life.* Whether worshipers of nature, Gods and Goddesses, Deity.

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For further illustrations on *Child Life* the teacher is referred to the wider range of material to be found in our general catalogue, to our regular Travel Tours on the different countries, to the special tour of child life studies called "Real Children in Many Lands," with fascinating descriptive guide of 250 pages, by M. S. Emery, particulars of which will be sent on application.

IN THE UNITED STATES

8 Children of Old New England.
84 A glorious May morning among the daisies.
*93 Girls attending the machines in a silk mill, Paterson, N. J.
94 Little girls in the silk mills, Paterson, N. J.
*114 Slate pickers at Scranton coal mines, Pennsylvania.
116 After the day's work in the mines, Scranton, Pa.
141 Children of Old Virginia.
*143 Grandchildren of this country's Father.
*156 Children in the great cotton mills of Georgia.
*160 Little colored girl picking cotton.
175 Children on the dike in Louisiana.
191 Feeding the tame deer on a ranch in Missouri.

*192 A little Indian baby and the home in which it lives.
*252 Peering into depths of Box Canyon.
*293 Little boy leading the cavalry through great tree—California.
310 Children of the Northwest picking berries, Washington.

POSSESSIONS OF THE UNITED STATES

*321 School children of Porto Rico.
324 Children love the cocoanuts, Porto Rico.
328 Children are always attracted by the soldiers.
329 Our little cousins in Panama.
*343 Children, also ferns and palms.
*348 Little cousins in the Samoan Islands.
354 Filipino school children at Manila.

CANADA

*378 Some of our little Canadian friends, Manitoba.

LATIN AMERICA

402 Little Mexican neighbors.
*434 Gathering bananas under the sunny skies of Jamaica.
*435 A sweet prospect.
441 With the "Father" of another country (by the statue of Bolivar).
*443 Children in the market place, Caracas, Venezuela.
445 At the steamer landing, Maracaibo, Venezuela.
446 In a lumber yard—Venezuela.
*450 Children of Colombia, S. A.
*456 School children of Guayaquil, Ecuador.
*458 A home full of children in Ecuador and a few extra.
*459 Preparing dinner in a home in Ecuador.
*473 Children of the Andes, Peru.

GREAT BRITAIN

*509 Near the home of their Queen.

*514 Children on the beach at Southsea, England.
*524 Some of our little English cousins, on the banks of the Teme.
*526 Children of Shakespeare land.
530 Children of the Wordsworth country.
535 Little Welsh children on the bridge at Conway, Wales.
*546 Little Scotch girls of Ayr, Scotland.
*562 Looking for the giant.
*567 Little Irish boys digging peat, Ireland.

SCANDINAVIA

*578 A little Norwegian boy among the haymakers.
*593 Children of the far north—a Lapp family near Tromsoe, Norway.
*594 Children at a Norwegian wedding.
597 Children on a street in Stockholm, Sweden.
*600 A little man of Rattvik, Sweden.
*601 In a barley field, Sweden.

NORTH OF EUROPE

*608 Children of St. Petersburg, Russia.
*618 How would you like to be a little boy in Russia?
636 Happy children on the Rhine River, Germany.
*644 Quaint little folk of Holland.
*649 Some children of Antwerp, Belgium.
*650 Little Belgian boy near Courtrai.

SOUTHWESTERN EUROPE

*668 Children working in the salt fields of Southern France.
*672 Boy ship buyers.
*679 Boy of Spain delivering milk in its original package.
*680 Children watching the water seller, Valencia, Spain.
*687 Children of Seville, Spain.
*692 Children of Gibraltar.

ALPINE COUNTRY

702 A boy of Lucerne, Switzerland.
*704 Children in the streets at Berne, Switzerland.

709 Little mountaineers of Switzerland.
*756 School children in Austria.
*758 A team in Austria.

SOUTH OF EUROPE

*731 A little boy near Naples, Italy.
*734 Boy in the marble quarries at Carrara, Italy.
*743 Children of Palermo, Sicily.
*744 Little Italian boy in a lemon grove in Sicily.
*747 Italian boy near the Strait of Messina, Sicily.
762 Young Athenians—Greece.
*771 Modern Spartans, and their homes, Greece.
*783 Children working on the rugs, Constantinople.
784 A tired little boy of Constantinople.

EGYPT AND ALGIERS

*801 Children on the upper Nile, Egypt.

AFRICA

*817 Children helping in the coffee fields, East Africa.

SYRIAN COUNTRY

848 Little fellows in a caravan, Palestine.
*851 A bright boy of Palestine watching to see where his bread is coming from.
853 Children on the shores of Galilee, Palestine.
*862 Little Syrian girl in her home.
*864 Little Syrian boy feeding the silk worms.
*866 Syrian boy sorting cocoons.
867 Attractive coat of a little Syrian boy.
868 Children boiling silk cocoons in a reeling mill, Syria.
878 Little girl on banks of Tigris River, watching the loading of the rafts.
*880 A little boy of Bagdad.
*881 Children of Bagdad.

INDIA, BURMA AND CEYLON

*884 India of to-morrow, handsome schoolboys of Amritsar.
*886 Children of Cashmere, India.
*887 Shawl weavers of Cashmere, India.
890 Children at Darjeeling, India, watching a "charming" scene.
894 Children in Calcutta, India.
905 High-class children out for a ride in India.
*908 Children at Rangoon, Burma.
911 Some of the youth of Mandalay.
914 A little boy of Burma.
916 On a timber raft in Burma.
*921 Children in Ceylon.

CHINA, JAPAN AND KOREA

*929 Mission children in Canton, China.
933 Children of Interior China.
*961 Under the cherry blossoms in Tokyo, Japan.
*973 Girls picking tea in Japan.
*981 Children of the Hermit Kingdom in school.

OCEANIA

*983 An errand boy on the street in Melbourne, Australia.
*992 Little girls among the hop vines in New Norfolk, Tasmania.
993 Girls of the old Maori race, as they are to-day, Auckland, New Zealand.
*997 Little Sudanese children, Garoet, Java.
998 Children in the Botanical Gardens, Buitenzorg, Java.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

CITIES AND CITY LIFE

BY

J. A. C. CHANDLER,

SUPERINTENDENT OF SCHOOLS, RICHMOND, VA.

362 STEREOGRAPHS OR SLIDES WITH 1,001 REFERENCES TO THEM.

Under this classification are given references furnishing studies of 124 different cities in all parts of the world.

First, the cities have been divided into three groups based on population; those having a population of 1,000,000 and over; those having from 100,000 to 1,000,000; and those having less than 100,000. It will be interesting to note wherein the larger cities differ from the smaller ones. Oftentimes, the secret of the cities' growth is apparent. Note the characteristics of the homes, the business streets, the modes and conditions of traffic, the relative size and heights of business blocks and such other features as may distinguish the several groups. Also compare the cities of nearly the same size in different countries.

Second, there are many ways in which cities dif-

fer other than in size, and therefore the cities have been grouped according to situation and conditions of growth, as follows, in addition to the three groups based on size.

Port Cities for Ocean Vessels (on the Coast).
Port Cities for Ocean Vessels Reached by Rivers.
Other Coast Cities.
Inland Cities on Lakes.
Inland Cities on Rivers.
Other Inland Cities.
Canal Cities.
Cities of Rapid Growth.

The third and last grouping takes into consideration that some cities center largely about one or two interests, without which they would not long continue to flourish, and in some cases would never have sprung into existence; hence the following groups:

Capital Cities.
Resort Cities.
University Cities identified with and dependent upon the university.
Cities of large Universities where the University is not Predominant.
Cities that center about an Industry.
Money Centers.

It is not necessary to point out the many comparisons of interest that can here be made. Each

teacher will find ways of her own for utilizing the material thus arranged.

Publishers' Note

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the lantern slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations for *Cities and City Life* the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

PART I

CITIES OF 1,000,000 POPULATION AND OVER

*29 to 52 (14 starred) New York City.
106 In Philadelphia.
*212 to *215 (4 starred) Chicago.
*487, *488, *489 Buenos Ayres.
*495 to 508 (9 starred) London.
*607, *608, 612 St. Petersburg.
*613, 614, 615 Moscow.
*621, 622, 623 Berlin.
*653 to *659 (6 starred) Paris.
*751 to *755 (3 starred) Vienna.
*777 to 784 (4 starred) Constantinople.
892 to *897 (2 starred) Calcutta.
*928, *929 Canton.
930, *931 Shanghai.
935, 936 Tientsin.
939, *943 Peking.

CITIES OF 100,000 TO 1,000,000 POPULATION

1 to 6 (4 starred) Boston, Mass.
*128 to 140 (8 starred) Washington, D. C.

*173, *174 New Orleans, La.
*188, *189 St. Louis, Mo.
190 Kansas City, Mo.
*195 to *199 (4 starred) Cleveland, O.
224, *225, *226 Minneapolis, Minn.
*284, 285 San Francisco, Cal.
*315 Seattle, Wash.
*371 Montreal, Can.
*398, 399 Mexico City, Mex.
*421 Havana, Cuba.
*451, *452, 453 Rio de Janeiro, Brazil.
*466, 467 Lima, Peru.
*492, *493, *494 Montevideo, Uruguay.
*537, *538 Edinburgh, Scotland.
*556 Dublin, Ireland.
*560, *561 Belfast, Ireland.
*572, *573 Christiania, Norway.
*596, *598 Stockholm, Sweden.
*604, *605 Copenhagen, Denmark.
*625 Dresden, Germany.
*638 Cologne, Germany.
*639, *640 Amsterdam, Holland.
*647, 648 Brussels, Belgium.
*649 Antwerp, Belgium.
*676, 677 Madrid, Spain.
*679, *680 Valencia, Spain.
*687, 688 Seville, Spain.
693, 694, 695 Lisbon, Portugal.
725, *729 Rome, Italy.
*730 Naples, Italy.
*736, 737 Florence, Italy.
*738, 739 Milan, Italy.
*740, 741, *742 Venice, Italy.
*743 Palermo, Sicily.
746 Catania, Sicily.
*761 to *767 (5 starred) Athens, Greece.

*786, 787 Cairo, Egypt.
*805 to 808 (2 starred) Algiers, Algeria.
839 Smyrna, Turkey.
856 to *860 (4 starred) Damascus, Syria.
883 Bombay, India.
*884 Amritsar, India.
898 Benares, India.
*899, 900 Agra, India.
901 to *904 (2 starred) Delhi, India.
*906 Madras, India.
907, *908 Rangoon, Burma.
*910, 911 Mandalay, Burma.
927 Hong-Kong, China.
*932 Hankow, China.
968, *969, *970 Kyoto, Japan.
979, *980, *981 Seoul, Korea.
*982, *983 Melbourne, Australia.
989 Sydney, Australia.

CITIES OF LESS THAN 100,000 POPULATION

12, 13 Gloucester, Mass.
*25 Lawrence, Mass.
*57 Poughkeepsie, N. Y.
58 Albany, N. Y.
82, *83 Atlantic City, N. J.
*159 Wharfs at Savannah, Ga.
*234 At Duluth, Minn.
256 Salt Lake City, Utah.
317 Juneau, Alaska.
*320 San Juan, Porto Rico.
341, *342 Honolulu, H. I.
*349 to *355 (4 starred) Manila, P. I.
*369, 370 Quebec, Can.
372 Ottawa, Can.
*375 Winnipeg, Can.
402 Ameca, Mex.

413 Guanajuato, Mex.
415, *416 Monterey, Mex.
*437 St. Pierre, Martinique.
*440, 441, *442 Caracas, Venezuela.
*447, 448 Santa Marta, Colombia.
449, *450 Barranquilla, Colombia.
462 Quito, Ecuador.
*478, 479 Arequipa, Peru.
484 Cuzco, Peru.
*517 Exeter, England.
*554 Queenstown, Ireland.
*584 Bergen, Norway.
*634 Heidelberg, Germany.
*665, 666 Nice, France.
673 Monaco, Monaco.
*684, *685 Granada, Spain.
689, 690 Cadiz, Spain.
696 Funchal, Madeira Is.
*698 Lucerne, Switzerland.
703, *704 Berne, Switzerland.
745 Modern Syracuse, Sicily.
748, *749 Messina, Austria.
750 Salzburg, Austria.
*760 Innsbrück, Austria.
*829, *830 Cape Town, S. Africa.
*844 Jaffa, Palestine.
846, 847 Jerusalem, Palestine.
890 Darjeeling, India.
988 Bendigo, Victoria, Australia.

PART II

PORT CITIES FOR OCEAN VESSELS (ON THE COAST)

1 to 6 (4 starred) Boston, Mass.
*29 to 52 (14 starred) New York City.
*284, 285, *286 San Francisco, Cal.

*320 San Juan, Porto Rico.
341, *342 Honolulu, H. I.
*349 to *355 (4 starred) Manila, P. I.
*421 Havana, Cuba.
*437 St. Pierre, Martinique.
*447, 448 Santa Marta, Colombia.
449, *450 Barranquilla, Colombia.
*451, *452, 453 Rio de Janeiro, Brazil.
455 Para, Brazil.
*487, *488, *489 Buenos Ayres, Argentine.
*492, *493, *494 Montevideo, Uruguay.
*554 Queenstown, Ireland.
*556 Dublin, Ireland.
*558, *559, *560 Belfast, Ireland.
*572, *573 Christiania, Norway.
*584 Bergen, Norway.
*596 to 599 (2 starred) Stockholm, Sweden.
*604, *605 Copenhagen, Denmark.
*665, 666 Nice, France.
*672 Dieppe, France.
*679, *680 Valencia, Spain.
689, 690 Cadiz, Spain.
693, 694, 695 Lisbon, Portugal.
696 Funchal, Madeira Islands.
*730 Naples, Italy.
*740, 741, *742 Venice, Italy.
*743 Palermo, Sicily.
745 Syracuse, Sicily.
746 Catania, Sicily.
748, *749 Messina, Sicily.
*761 to *767 (5 starred) Athens, Greece.
*777 to 784 (4 starred) Constantinople, Turkey.
*805 to 808 (2 starred) Algiers, Algeria.
*829, *830 Cape Town, So. Africa.
839 Smyrna, Asia Minor.
*844 Jaffa, Palestine.

*883 Bombay, India.
*906 Madras, India.
927 Hong-Kong, China.
930, *931 Shanghai, China.
*946, 951 Port Arthur, Manchuria.
959 to *962 (3 starred) Tokyo, Japan.
989 Sydney, Australia.

PORT CITIES FOR OCEAN VESSELS (REACHED BY NAVIGABLE RIVERS)

106 Philadelphia, Penna. (Delaware River).
*159 Savannah, Georgia (Savannah River).
*173, *174 New Orleans (Mississippi River).
*315 Seattle, Wash. (Strait of Juan de Fuca, Admiralty Inlet and Puget Sound).
*369, 370 Quebec, Canada (St. Lawrence River).
*371 Montreal, Canada (St. Lawrence River).
388 Vancouver, Canada (Strait of Georgia).
*495 to 508 (9 starred) London, England (Thames River).
*602 Jonkoping, Sweden (Gota Canal).
*607 to 612 (3 starred) St. Petersburg, Russia (Neva River).
*639, *640 Amsterdam, Holland (Amstel & Y Rivers).
641 Delftshaven, Holland (Meuse River).
*649 Antwerp, Belgium (Schelde River).
892 to *897 (2 starred) Calcutta, India (Hugli River).
907, *908 Rangoon, Burma (Irrawaddy River).
*928, *929 Canton, China (Canton or Pearl River).
979, *980, *981 Seoul, Korea (Han River).

OTHER COAST CITIES

82, *83 Atlantic City, N. J.
*169 Palm Beach, Fla.
*514 Southsea, England.
733 Amalfi, Italy.

INLAND CITIES ON LAKES

*195 to *199 (4 starred) Cleveland, Ohio (Lake Erie).
*212 to *215 (4 starred) Chicago, Ill. (Lake Michigan).
*233 Two Harbors, Minn. (Lake Superior).
*234 Duluth, Minn. (Lake Superior).

INLAND CITIES ON RIVERS

*57 Poughkeepsie, N. Y. (Hudson River).
58 Albany, N. Y. (Hudson River).
*128 to 140 (8 starred) Washington, D. C. (Potomac River).
*188, *189 St. Louis, Mo. (Mississippi River).
190 Kansas City, Mo. (Missouri River).
372 Ottawa, Canada (Ottawa and Gatineau Rivers).
*375 Winnipeg, Canada (Red and Assiniboine Rivers).
413 Guanajuato, Mexico (Guanajuato River).
415, *416 Monterey, Mexico (San Juan River).
*466, 467 Lima, Peru (Rimac River).
*478, 479 Arequipa, Peru (Chili River).
*512 Canterbury, England (Stour River).
*517 Exeter, England (Exe River).
*520 to 523 (3 starred) Worcester, England (Severn River).
*529 Durham, England (Wear River).
*613 to 616 (1 starred) Moscow, Russia (Mosqua River).
*621 to 623 (1 starred) Berlin, Germany (Spree River).
*625 Dresden, Germany (Elbe River).
*628, *629 Nuremberg, Germany (Pegnitz River).
*634 Heidelberg, Germany (Neckar River).
*635 Bingen, Germany (Rhine River).
*638 Cologne, Germany (Rhine River).
*647, 648 Brussels, Belgium (Senne River).
*653 to *659 (6 starred) Paris, France (Seine River).
662, *663 Rheims, France (Vesle River).
*676, 677 Madrid, Spain (Manzanares River).
*687, 688 Seville, Spain (Guadalquiver River).
*698 Lucerne, Switzerland (Reuss River).

703, *704 Berne, Switzerland (Aare River).
725 to *729 (3 starred) Rome, Italy (Tiber River).
*736, 737 Florence, Italy (Arno River).
750 Salzburg, Austria (Salzach River).
*751 to *755 (3 starred) Vienna, Austria (Danube River).
*760 Innsbrück, Austria (The Inn River).
*786, 787 Cairo, Egypt (Nile River).
890 Darjeeling, India (Runjeet River).
898 Benares, India (Ganges River).
*899, 900 Agra, India (Jumna River).
901 to *904 (2 starred) Delhi, India (Jumna River).
*932 Hankow, China (Han and Yang-tse Rivers).
935, 936 Tientsin, China (Pei-Ho River and Grand Canal).

OTHER INLAND CITIES

256 Salt Lake City, Utah.
*398, 399 Mexico City, Mexico.
402 Amecameca, Mexico.
409 Jalapa, Mexico.
*440 to *443 (3 starred) Caracas, Venezuela.
*454 San Paulo, Brazil.
*460 Quito, Ecuador.
484 Cuzco, Peru.
*684, *685 Granada, Spain.
*738, 739 Milan, Italy.
846, 847 Jerusalem, Palestine.
*857 to *860 (4 starred) Damascus, Syria.
*884 Amritsar, India.
*910, 911 Mandalay, Burma.
918, 919 Kandy, Ceylon.
937 to *943 (2 starred) Peking, China.
*966 to *970 (4 starred) Kyoto, Japan.
988 Bendigo, Australia.
*997 Garoet, Java.
998 Buitenzorg, Java.

CANAL CITIES

This group is here referred to as "Canal Cities," because the Canals are the most characteristic feature common to these cities. The canals are merely the result of the physical features of the land, and therefore fall under the same general classification with coast cities. Hill Cities, Plain Cities, etc.,—what have these cities in common with one another? What have they in common with other cities? What have they, other than the canals, that other cities do not have? What do they lack that most cities have?

***639, *640 Amsterdam, Holland.**
641 Delftshaven, Holland.
***740, 741, *742 Venice, Italy.**

CITIES OF SUDDEN GROWTH

This group includes cities that have grown up in an abnormally short time, as the result of some great boom. This sudden growth has been as great a determining factor in the character of the city as the physical features of the surrounding country. How do these cities compare with the cities that have had a more normal development? Note any difference in the streets or in the buildings, etc. Where are these cities found, as a rule?

82, *83 Atlantic City, N. J.
190 Kansas City, Mo.

*212 to *215 (4 starred) Chicago, Ill.
224, *225, *226 Minneapolis, Minn.
*234 Duluth, Minn.
*284, 285 San Francisco, Cal.
*315 Seattle, Wash.
317 Juneau, Alaska.
*375 Winnipeg, Manitoba.
*829, *830 Cape Town, British South Africa.
988 Bendigo, Australia.
989 Sydney, Australia.

PART III

As has been suggested in the introductory note at the beginning of this classification, some cities have built up around an industry, and others have been built up around a university, a government seat, or a health resort. Still others, while they have not actually sprung into existence because of such interests, are largely dependent upon the continuance of such interest for their present and future development.

CAPITAL CITIES

As a rule, cities that are centered about the seat of government, whether state or national, are without much in the way of industry and are apt to develop slowly. The following group will furnish material for an interesting study:

1 to 6 (4 starred) Boston, Mass.
58 Albany, N. Y.

*128 to 140 (8 starred) Washington, D. C.
*320 San Juan, Porto Rico.
341, *342, *343 Honolulu, H. I.
*349 to *355 (4 starred) Manila, P. I.
372 Ottawa, Canada.
*398, 399 Mexico City, Mexico.
*421 Havana, Cuba.
*440 to *443 (3 starred) Caracas, Venezuela.
*451, *452, 453 Rio de Janeiro, Brazil.
462 Quito, Ecuador.
*466 Lima, Peru.
*487, *488, *489 Buenos Ayres, Argentine.
*492, *493, *494 Montevideo, Uruguay.
*495 to 508 (9 starred) London, England.
*572, *573 In Christiania, Norway.
*596 to 599 (2 starred) Stockholm, Sweden.
*604, *605 Copenhagen, Denmark.
*607 to 612 (3 starred) St. Petersburg, Russia.
*621, 622, 623 Berlin, Germany.
*625 Dresden, State of Saxony.
*639, *640 Amsterdam, Holland.
*647, 648 Brussels, Belgium.
*653 to *659 (6 starred) Paris, France.
673 Monaco, Monaco.
*676, 677 Madrid, Spain.
693 to 696 Lisbon, Portugal.
703, *704 Berne, Switzerland.
725 to *729 (3 starred) Rome, Italy.
*751 to *755 (3 starred) Vienna, Austria.
*761 to *767 (5 starred) Athens, Greece.
*777 to 784 (4 starred) Constantinople, Turkey.
*786, 787 Cairo, seat of British rule in Egypt.
*805 to 808 (2 starred) Algiers, Algeria.
*829, *830 Cape Town, seat of British rule in South Africa.
839 Smyrna, seat of Turkish rule in Asia.

901 to *904 (2 starred) Delhi, seat of British rule in India.
939 to *943 (1 starred) Peking, China.
959 to *962 (3 starred) Tokyo, Japan.
*982, *983 Melbourne, Australia.
989 Sydney, New South Wales.

RESORT CITIES

Cities that have been built up about a resort have many features peculiar to their class, and are usually altogether lacking in many of the things which one ordinarily expects to find in a city. One of the striking characteristics of this kind of a city is the large number of hotels. What are other distinguishing features? Compare with industrial cities. Compare with University cities.

82, *83 Atlantic City, N. J.
*169 Palm Beach, Fla.
*514 Southsea, England.
*665, 666 Nice, France.
*672 Dieppe, France.
*698 Lucerne, Switzerland.
*716 Village of Glion, Lake Geneva, Switzerland.
733 Amalfi, Italy.
*760 Innsbrück, Austria.

CATHEDRAL CITIES

(See under the classification on *Architecture* the list of cathedrals.)

CITIES THAT ARE OR HAVE BEEN CENTERS OF RELIGIOUS INTEREST

In one way or another, and in varying degrees, the cities here listed are centers of religious interest. Some have given birth to new religions, some have been founded by religious sects, and others are the shrines of religious sects at the present time, or have been in the past. Note the characteristics of these cities, and contrast with those of other groups.

1 to 6 (4 starred) Boston, Mass. (Has been the center of numerous denominations of the Christian Church, including Congregationalism, Unitarianism and Christian Science.)

106 Philadelphia, Penn. (The Quaker City.)

256 Salt Lake City, Utah (Mormon).

*512 Canterbury, England (seat of the Primate of the Church of England).

*537, *538 Edinburgh, Scotland (Knox and Presbyterianism).

*607 to 612 (3 starred) St. Petersburg, Russia (present head of Greek Catholic Church).

*613, 614, 615 Moscow and the Kremlin, Russia. (Former head of Greek Catholic Church.)

725 to *729 (3 starred) Rome, Italy (head of the Roman Catholic Church).

773 Delphi, Greece (seat of the Ancient Oracle of Delphi).

*777, 784 Constantinople (home of the Sultan—head of Mohammedanism).

*786, 787 Cairo, Egypt (center of Mohammedan education).

846, 847 Jerusalem, Palestine (capital of the Jewish religion and center of the early Christian church).

*884 Amritsar, India (sacred shrine of the Sikhs).

898 Benares, India (sacred shrine of Brahmanism and birthplace of Buddhism).
*899, 900 Agra, India (Mohammedan).
909 Pegu, Burma (Buddha).
*910, 911 Mandalay, Burma (Buddha).
937 to *943 (2 starred) Peking (former seat of Government of "The Son of Heaven").
*964, 965 Nikko, Japan (tombs of dead Shoguns and sacred shrine).
*966 to *970 (4 starred) Kyoto—Japan (former head of the Government of the Mikado, who was regarded as divine).
999 Boro Boedeor, Java (Buddhist).

UNIVERSITY CITIES

University Cities usually have many features all their own. What are some of them? These cities have a large proportion of floating inhabitants; are there so many hotels as in the Resort Cities? This and other comparisons will be found of value.

(*Cities in which the University is predominant*)

*7, 8 Cambridge, Mass. (Harvard).
511 Oxford, England.
*634 Heidelberg, Germany.

(*Cities with large Universities but not dependent upon these institutions*)

*29 to 52 (14 starred) New York City, N. Y.
*212 to *215 (4 starred) Chicago, Ill.
*786, 787 Cairo, Egypt (center of Moslem learning—over 7,000 students—once had 15,000).
892 to *897 (2 starred) Calcutta, India.
*906 Madras, India.

937 to *943 (2 starred) Peking, China.
959 to *962 (3 starred) Tokyo, Japan.
*982, *983 Melbourne, Australia.

CITIES THAT CENTER ABOUT ONE OR TWO INDUSTRIES

Many interesting questions arise in connection with cities that center about some one or two industries. What first attracted the industry? Were there natural causes? If so, what? How has the character of the city been affected in this way? Compare with other groups.

12, 13 Gloucester, Mass. (fisheries).
*25 Lawrence, Mass. (textiles).
92 to 104 (8 starred) Paterson, N. J. (silk industry).
*173, *174 New Orleans, La. (sugar, cotton and rice).
224, *225, *226 Minneapolis, Minn. (flour and lumber).
317 Juneau, Alaska (gold).
*375 Winnipeg, Manitoba (flour and agricultural products).
*421 Havana, Cuba (tobacco).
484 Cuzco, Peru (silver mines).
*558, *561 Belfast, Ireland (shipbuilding and linen industry).
*584 Bergen, Norway (fisheries).
*639, *640 Amsterdam, Holland (diamond cutting).
673 Monaco, Monaco (Monte Carlo—gambling).
*829, *830 Cape Town, South Africa (diamonds).

GREAT CENTERS OF FINANCE

There are a few cities that figure as the world's money centers. Other cities are centers of limited territory, but do not figure largely in the finances of

the world. Note the facts in connection with this group of cities.

*29 to 52 (14 starred)	New York City, U. S. A.
*495 to 508 (9 starred)	London, Eng.
*607 to 612 (3 starred)	St. Petersburg, Russia.
*621, 622, 623	Berlin, Germany.
*653 to *659 (6 starred)	Paris, France.
*751 to *755 (3 starred)	Vienna, Austria.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs, suitable for wall decoration, of any subject in the above list in sizes 16 x 20—20 x 24.

CIVIC BETTERMENT

EDITED BY
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175 STEREOGRAPHS OR SLIDES WITH 224 REFERENCES TO THEM

The subjects selected from the series for the study of Civic Betterment are chosen largely for the purpose of showing contrasts, and are here classified under the following general headings:

City Planning
Streets
Buildings
Parks
Water Fronts
Monuments
Bridges
Tenements
Factories and other centers of industry.

The contrasts are not drawn with equal sharpness in all cases; and it may seem that in some cases what is good has been classed as bad or vice versa;

but it all depends on the point of view. The aim has been to put the material into as convenient an arrangement as possible; and those using it will have no difficulty in selecting those subjects that best illustrate the particular point in question.

A condensed classification at the end is made to show specific features, as street lighting, street paving, regularity or irregularity of architecture, etc.

The numbers refer to the serial numbers in the upper right-hand corner of the stereographs. The numbers starred are included in the special 600 series.

CITY PLANNING

129** ***Washington, D. C., from Monument.
128** ***Washington, D. C.
130** ***Washington, D. C., east from the Monument.
131** ***Washington, D. C.

These views show some possibilities of city planning. Washington, in its main features, is a city beautifully planned at its beginning along lines which have been more or less closely followed up to the present time.

34** ***New York City from the Flatiron Building.
35** ***New York City. Looking south from Metropolitan Tower.
31** ***Skyscraper area of New York City from Brooklyn Bridge.
30** ***New York from the Harbor.

***33 New York, Looking over the Docks.**

***32 New York, Looking from World Building across Brooklyn Bridge.**

The growth of New York and its street system has been determined by the shape of Manhattan Island. When the city was laid out by the early settlers about 300 years ago, it was thought that most of the travel would be from one shore to the other, east and west, across the island, consequently many streets were laid out in this direction, and very few along the length of the island, north and south. This was a mistake in planning, and has led to inconvenience to property owners, and also to the city, in having too few north and south streets running the length of the island.

New York is further marked in character by its ungoverned development. The individual owners have had free choice in the development of their property, so that buildings have no harmony whatever. The downtown business area is too intensively developed for its street system, which is practically the same as it was at the time of the Dutch occupation.

***256 View of Salt Lake City.**

This is a typical city of the west in that its street system is on the rectangular plan. This plan has advantages in that it is simple, although it does not have the diagonal streets which are necessary to provide easy access between one part of the city and another. The presence of shanties and unkempt spaces along streets finely developed and planned is not a feature to produce good conditions.

***371 View of Montreal, Canada.**

This city is beautifully situated on the St. Lawrence River. This river and the hill from which the city gets its name, Mount Royale, have shaped its development

so that it has spread up and down the river. The residence district is shut off from the use of the river by the business, industrial and railroad sections, under whose control it has formed. The fine development of trees throughout the residential section should be noted.

375 *Winnipeg, Canada.

This city has had the most wonderful opportunity to grow along fine lines. It is a new city, less than fifty years old, unhampered by topographic features other than the presence of a river. The street system is good, but lacks diagonals. No control is exercised over railroad development, and this will bring about a condition in a few years which will cause the utmost chaos in the uses of the areas of the city unless some control over the location of industries is exercised by the authorities.

320 *San Juan, Porto Rico.

This city has had an uncontrolled growth. There is no uniformity in the building lines.

466 *Lima, Peru.

No attempt has been made to control the growth of this city. Its shape and direction of development have been determined by the nature of the land.

537 *General View of Edinburgh.

Edinburgh grew around the castle which, for the purpose of protection during early times, was placed on top of a cliff which had only one approach. No plan was laid out for this city, and its lines of growth have been determined largely by the nature of the ground. It is an admirable thing a city should have in its business center and around its railroad terminal a fine park development such as this.

*654 ***Paris, Looking south from the Arch of Triumph.***

*655 ***Paris, Looking east from the Arch of Triumph.***

*656 ***Paris, Looking south-east from the Louvre.***

There is only one Paris. Baron Hausmann, over fifty years ago, undertook and carried out the development of a city plan. The old, straggling city streets were unified and straightened, and a complete comprehensive plan was developed, so that to-day, although portions of the improvements projected at that time are still being carried out, Paris is a city, the most remarkable in the world for its well-planned street system and its beautiful development.

689 ***Cadiz, Spain.***

A natural sense of order in the people has developed a general harmony of architecture. There is a uniformity of height of buildings which relieves the intense occupation of the areas shown in the picture. The ventilation and lighting in the rear of these buildings must be very imperfect. The development of open spaces as parks in the midst of this densely built section relieves the otherwise bad conditions.

*605 ***General View of Copenhagen, Denmark.***

This is a city marked by good general planning determined largely by its water front.

*639 ***View of Amsterdam, Holland.***

This city is marked in its character by the natural taste of a people who appreciate the value of general harmony of arrangement. It is a very old city, whose growth has been determined largely by its land-locked natural harbor. In this stereograph there should be noticed a development of the shore front as a park and at the same time its unhampered commercial use. It should be noted also in this picture that factories are

scattered throughout the residential areas of the city. Also, that no attempt is made to retain the river for large shipping, which is taken care of in the outer harbor. Only small boats use the river.

*621 ***Berlin, Germany.***

This is a city whose character is marked by good general planning, well carried out. There should be noticed in this stereograph the fact that of the whole lot on which each building stands certain portions are left vacant for the purpose of admitting light and air. The principle of setting aside areas for industrial, residential and business purposes is followed. Laws and regulations are enforced, which control the growth of the city, both as to nature and character of the buildings. Outlying districts are bought up by the Government and reserved for certain purposes.

*638 ***Cologne, Germany.***

This city is marked by its good general planning. In this view should be noted the development of the river front for the use of all the people by making it a boulevard.

*634 ***Heidelberg, Germany***

This city has had no plan. It has just grown indiscriminately, and its growth has been shaped by the lay of the land and water.

*584 ***Bergen***

This city is marked by its natural unguided growth. Houses are built as close together as possible, and there is no regularity in the buildings.

*751 ***View of Vienna, Austria***

*752 ***View of Vienna, Austria***

The growth of this city has been planned for from time to time, and has been marked by the natural taste

of the people. Industries, business and residence areas have been provided in such a way that industry will not encroach on and spoil residence districts, and in such a way also that they will give way before the advance of these residential areas.

750 General View of Salzburg, Austria.

The character of Salzburg is marked by the general harmony of arrangement arising from the natural taste of its people. Its growth has been determined by the general topographical nature of the country and by the presence of water. The fine development of the river front is a feature of this city.

****726 View of Rome, Italy, from St. Peter's Dome.***

It is curious that this city, which was founded by one of the most efficient of the earlier peoples, should have had a later growth absolutely uncontrolled. The disregard for city planning was further accentuated by the shape of the surrounding country and the presence of the River Tiber. It is proposed to run a vista from the River to St. Peter's.

****728 View of the Forum in Rome, Italy.***

This view shows in the old city of Rome, built by the Romans, a regularity of architecture and an orderliness of arrangement.

****736 General View of Florence, Italy.***

In this city the cathedral centers the attention. This is one of the free cities of very early times. It was one of the centers of commerce in the 13th, 14th and 15th centuries.

737 View of Florence, Italy.

The intense occupation for dwelling purposes of the area in the foreground of this picture should be noted. This is bound to create, along with the narrow streets

of the old cities, unhealthy and immoral conditions among the people.

*730 ***Bird's-eye View of Naples.***

This is an old city, and its growth has been determined by the shape of the land and its position on the water front. It is beautifully situated and attractively developed. The narrow streets and intensive occupation of the ground make living conditions in the congested sections of this city very unhealthy. In this view there should be noted this intensive occupation and narrowness of the streets, shutting out light and air.

748 ***View of Messina, Italy.***

The regularity of the building development along the river should be noted. This development is worthy of better setting.

733 ***Amalfi, Italy.***

This city has had its development controlled by the shape of the land and its location on the sea. The town has had to build itself on the side of a cliff, and consists practically of two streets cut out of solid rock. What is seen in the view is the remains of what was once a thriving and independent city, with a population of 50,000 people.

*740 ***Venice from S. Giorgio Island.***

It was impossible for this city to be developed according to any plan, since it grew up on a number of islands. The waterways between these islands take the place of what would be the arteries of traffic in other cities. These features have developed a city which has no parallel in the world, and just as there is only one Paris, so there is only one Venice.

*761 *766 ***Athens, Greece.***

There is no attempt in Athens to regulate the development of the buildings. The streets are, generally speaking, narrow and crooked. The city has an uncared-for appearance.

*857 ***View of Damascus.***

The very intense occupation of the areas make for congested and unhealthy conditions. This city is over 5,000 years old. Its growth has been stopped for many years, and its problems, although dating back to its early days, are practically the same as the problems which have to be met in modern cities.

839 ***Smyrna.***

There has been no control of development in this city. Its streets are narrow and the houses seem to face in any direction at the will of the owner.

940 ***Peking, China.***

This city, although distinctly Oriental, has been developed according to a plan. It presents a symmetry in growth and in its street arrangement.

930 ***View of Shanghai, China, from the south, along the Whangpoo River.***

927 ***Kowloon, China, view from above Hong-Kong.***

959 ***Tokyo, Japan.***

There is no regularity in development, and hardly any street system has been developed in this section of the city.

TYPICAL STREETS

*33 ***West Street, New York City.***

This is a water-front street, and very different from those of European cities. This view shows the irregularity of architecture arising from private disregard for order. The paving on this street, although apparently

bad, is of a durability to handle the very heavy trucking of merchandise to and from the docks. The apparent confusion of traffic arises from wagons turning into and out of the docks, and it would be impossible to regulate it to any degree of satisfaction.

34 View of 4th Avenue at Madison Square, New York City.

In the development of this street there has been private disregard for order in the irregularity of the architecture. There has been no relation between one building and another. The paving and the lighting in the street are both good.

36 Lower Broadway, New York City.

There has been no private regard for order in the architectural relation of the buildings along this street, although the street in recent years has had a strong tendency toward improvement. The traffic flows freely because it is policed; the paving is good. Being a business street, there is no planting on it of any kind.

****38 Wall Street, New York City.***

This is one of the narrow streets of the downtown business section. In spite of the irregularity of the architecture of the buildings, the church at the end of the street removes somewhat from its purely material aspect. The sidewalks are not quite free from obstructions.

39 Broad Street, New York City.

The irregularity of the architecture along this street arises from the private disregard for order. This street is congested by its use on the part of stock-broking houses as a curb market. The paving and lighting on this street are good.

*40 ***Broadway & 6th Avenue at Herald Square, New York City.***

This street is marked by the irregularity of the architecture arising from the private disregard for order. It is a point where traffic concentrates and becomes congested and requires very careful policing in order to make it safe for foot passengers. The presence of the elevated road, where no attempt has been made to make it attractive, adds to the lack of harmony. The street at this intersection is well paved to suit the mixed kind of traffic which uses it. The lighting along this street is good.

*41 ***Fifth Avenue, New York City.***

This street is marked by the irregularity of its architecture arising from private disregard for order. It is well built, however. Its traffic flows freely, and is under complete police control. Its paving and lighting are both good. Being a business street, it is unplanted.

*42 ***Elizabeth Street, New York City.***

This street is unattractive, and is in the heart of the lower East Side tenement district of New York City. It is interesting to note that the use of the street by peddlers is typical of this section. The roadway is inclined so that the traffic, of which there is a great deal for a street of this nature, has difficulty in getting around. The lighting on this street is poor and insufficient.

*3 ***Washington Street, Boston, Mass.***

The architecture on this street has an irregularity arising from private disregard for order. This street is well lighted and well paved. Although this picture does not show it, the congestion on this street is fearful and a menace to people on foot. The tangle of overhead

wires should be noted and the presence of signs overhanging the sidewalk. The street is narrow and one of the oldest in Boston.

*131 ***Pennsylvania Avenue, Washington, D. C.***

The irregularity in the architecture, arising from private disregard of order, marks this street. The paving and lighting are both good, and the traffic being well policed flows freely. Being an avenue, and not used for business, this street is broad and tree planted.

*189 ***Broadway, St. Louis, Mo.***

This street is in general unpleasing. There is present that irregularity of architecture arising from private disregard of order which is found in most American cities. Here the one redeeming feature in the street is the absence of overhanging signs. There is no planting since it is used for business. The pavement on this street is irregular, that underneath the street-car line needing repair. The telegraph poles and overhead wires add to the general unsightliness. The lighting is fairly good.

*212 ***State Street, Chicago.***

This street has many good features. It is wide, but is injured by the presence of trolley poles. It has good lighting, and its pavement, except for that in the neighborhood of the car tracks, is good. There is lack of control of traffic which is in confusion, and this creates a condition which is dangerous to pedestrians. This view shows this street before the pavement was improved and before the traffic was properly regulated. This street is the main shopping street of Chicago.

*342 ***Port Street, Honolulu, H. I.***

This street is well paved, but there is an irregularity about the architecture which gives it an unattractive

appearance. The tangle of overhead wires, some of them to support the electric lights, presents a terrible condition of danger to pedestrians.

*351 *Escolta Street, Manila, P. I.*

This is a street where the Oriental is mixed with the European. The paving, although not good, is of a quality which is durable. The street is unclean and dangerous from the overhead wires and hanging signs. There is no orderly development in the architecture.

*452 *Central Avenue, Rio de Janiero.*

The architecture along this street, being regulated by law, is uniform. The paving on this street is good, and is kept clean. The lighting in the center of the street is good and adequate. The width of this street gives it an attractiveness, which is added to by the planting and by its orderliness. There is a total absence of overhead wires, although there is evidence of the presence of overhanging signs.

455 *Para, Brazil.*

This is a typical example of misuse of streets on the part of business houses. It is here used for packing goods and services which should be done inside the premises of a business house. The overhead wiring is a bad feature of this street.

*493 *Principal Street in Montevideo.*

Uniformity of architecture in the buildings in this street appears to be regulated by law. The pavement is of a nature suitable to the sloping street. It needs repair at the car tracks. It is clean and attractive and well planted, and is worthy of better lighting than is provided by lamps hung from wires which are a menace. The breadth of this street is one of its attractions.

500 Cheapside, London.

There is an orderliness about the architecture on this street, arising from the natural sense of order in the people. The traffic, although congested, is regulated and flows freely. The pavement is good, and the lighting, though antiquated, is good.

538 Princess Street, Edinburgh, Scotland.

There is a general sense of order in the development of this street. The lighting is good and adequate. The park along one side, which screens the railroad station and yards, enhances the attractiveness of the street. It is a business thoroughfare. The paving on the street is rough and suitable for a street on a slope. There is a certain lack of regulation in the traffic.

556 Westmoreland Street, Dublin, Ireland.

This street is marked by orderliness. It is marred by the overhead trolley wires and by the rough pavement suitable for heavy trucking. This street is well lighted and clean.

561 Royal Avenue, Belfast, Ireland.

The character of this street is marked by the uniformity of its architecture. The lighting of the street, though antiquated, is plentiful. The traffic is regulated and its paving is good, and suitable for heavy teaming.

573 Karl Johan Street, Christiania, Norway.

This street presents a fine vista. Its attractiveness is added to by the uniformity of the architecture along its streets. The pavement is rough and suited to the nature of a sloping street. It is clean and well kept, although the street in general is marred by the overhead wires. It is interesting to note the placing of street cars on one side of the street instead of in the center.

597 Vasagatan Street, Stockholm.

In spite of the overhead trolleys the effect in this street is pleasing. There is an orderliness arising from the natural sense of order in the people. The paving is good, as is the lighting. The street is lined with trees, which add to its attractiveness.

****607 The Principal Street of St. Petersburg, Russia.***

This is a splendid wide street, with adequate roadways and good, wide sidewalks. The buildings along the street are irregular, and there is little uniformity in the architecture. The lighting on this street is good and the pavement of a nature suitable to the sloping street. The traffic is regulated and, in general, there is an orderly appearance to the street.

622 Unter-den-Linden, Berlin.

The uniformity of the architecture, which is regulated by law, is one of the marked features of this street. The parking in the center adds greatly to the planting along the sides. This is entirely a boulevard street, no business being done on it. Its traffic is under complete control by the police. Its paving and lighting are good.

623 Bülow Street, Berlin, Germany.

This street is well-kept, clean and well paved. It is, however, marred by the overhead wiring for the street cars. The elevated structure has been made pleasing by means of proper architectural treatment and planting, and has not the ungainly and ugly appearance so common in this country. The lighting of gas is out of date.

****654 Avenue Kleber, Paris.***

The architecture in this street is uniform, being regulated by law. Its paving is good. Being free from business, it is broad and tree-planted.

***655 Champs Elysées, Paris.**

This street is a broad, tree-lined avenue on which traffic flows freely, being well policed. It is well lighted and paved. The architecture is uniform, being regulated by law.

***677 Calle de Alcala, Madrid, Spain.**

This is one of Madrid's best streets. It is marked by orderliness. The planting along the sides of the street and its great width and its well-kept appearance add to its attractiveness. It is marred, however, by the trolley poles and overhead wires for the use of the street cars.

***679 A Street in Valencia, Spain.**

The paving in this street has a solid, clean appearance. The sidewalks, however, are narrow, and it is imperfectly lighted.

***760 Main Street in Innsbrück.**

The attractive feature of this street is its width. The buildings are irregular, except for the sky line, which is fine. The attractiveness of the street is enhanced by the presence of a mountain.

***751 Franzens Ring, Vienna, Austria.**

The uniformity of the architecture in this street, which is regulated by law, is very pleasing. Paving and lighting are good and, being free from business, it is a broad tree-planted avenue.

***807 Main Street in Algiers, Africa.**

The general attractiveness of this street is due to occupation by the French. For a frontier town, one would not expect paving or lighting to be much better. Neither of these is of very good quality. The regularity of the architecture is very pleasing. The street is marred by overhead wires, but is otherwise orderly.

*782 *"Step" Street in Constantinople, Turkey.*

This is a typical Eastern street, narrow, congested and with as much business done in the street itself as in the buildings which line it. The lighting in this street is poor, the pavement is suitable.

787 A Street in Cairo, Egypt.

Note the narrow, congested nature of this street and the quality of the buildings. The sheds which line this street add to the disorder created by the grade.

846 Christian Street, Jerusalem.

This is a typical street of the East. It is narrow and congested, and used for business purposes.

*830 *Adderly Street, Cape Town, South Africa.*

The private disregard for order has brought about the lack of regularity in the architecture along this street. The overhead trolley wires are here limited to the center of the street. The pavement of this street is very bad. Note the regulation of standing vehicles.

*892 *Street in Calcutta, India.*

This street, though marred to some extent by the presence of overhead wiring, has a fine appearance. The paving is fine. Traffic is not regulated. This is hardly necessary, as the street has a great width and the street cars being off to one side do not interfere. This is an example of European influence on civic development in India.

*895 *Harrison Street, Calcutta, India.*

This street is an example of the worst possible conditions. The use of the street as a sewer is typical of the East. It is disease-creating and awful.

939 Thoroughfare in Peking, China.

The disordered architectural condition of this street is typical of the streets of the Orient. It is unpaved, undrained, uncontrolled, and the buildings are erected in any way that the individual sees fit. There is no community spirit.

****983 Collins Street, Melbourne, Australia.***

The irregularity of the architecture is brought about by the private disregard for order. The paving in this street is good, and the lighting is good, but the telegraph poles and the overhead wires add unsightliness to the street. There is no traffic congestion on this street.

BUILDINGS

58 Capitol Building, Albany, N. Y.

A building of charm and dignity of design, situated on an elevation. It dominates the entire city.

53 A Railway Station, Larchmont, N. Y.

34 Madison Square Garden, New York.

39 New York Stock Exchange & U. S. Sub-Treasury Building.

The Stock Exchange Building, architecturally, shows the modern use of the classic elements suited to particular conditions imposed by the character of the occupancy. The Sub-Treasury Building shows the old style of Government building, faithful to architectural tradition with the occupancy adjusted to the building.

****45 Immigrant Station, New York Harbor.***

Modern architecture. Building built on a symmetrical plan—the towers and gable roof giving a varied sky-line.

*106 **Philadelphia, Independence Hall.***

Example of rich Colonial architecture. The later wooden addition to the tower completes an interesting silhouette.

2* ***The State House, Boston, Mass.*

Architecturally of early Colonial period, its gilded dome, surmounting the broad pediment and expansive colonnade, overlooks the whole of the city.

6 ***Boston, The Public Library.***

This building is marked by its dignity and simplicity. Its exterior expresses clearly the utility of the interior. The proportion of the great windows in the reading rooms, and their relation to the whole façade, are excellent.

132* ***Washington Capitol. East Front.*

Marked by simplicity of design and dignity of proportion and mass.

129* ***White House, Treasury and State Department Buildings, Washington, D. C.*

These buildings, varying greatly in architecture and purpose, are, however, admirably located and grouped in a dignified and symmetrical plan.

137* ***Washington, White House.*

A building of beauty and excellence in design, typical of the best in America's early architecture.

4* ***Faneuil Hall, Boston, Mass.*

More valued historically than architecturally. The building would gain by the removal of the markets on its first floor and also of the overhanging canopy over the sidewalk.

***398 Mexico. The Cathedral.**

Its Spanish architecture is traditional to this country, and its location on the principal square or Plaza dominates the whole city.

***372 Government Buildings. Ottawa, Canada.**

The towers and great roofs are characteristic of the Gothic government buildings of England; here, however, in detail treatment, is much of individual influence.

***370 Quebec. The Châteaux.**

The building has the dominant position on the river. The characteristics of the building, its towers and massive structure harmonize with its position and suggest the fortified Châteaux of France.

***330 Panama, Ancon Hospital.**

These buildings are primarily utilitarian, but have a definite decorative sense of their structural lines. Absence of landscape treatment.

***638 Cologne Cathedral. The Greatest of German Gothic Churches.**

It has remarkable grace in its lines, considering its mass. The twin spires are of openwork construction, characteristic of many German churches in this style.

***488 Buenos Ayres, South America.**

An example of good architecture of a governmental and monumental type.

***494 Public Square. Montevideo, Uruguay, S. A.**

Example of formal treatment of tropical planting. The use of the similar colonades on the buildings fronting the square give a unity and orderly character to both architecture and the Plaza.

*454 ***San Paulo, Brazil.***

A magnificent structure—in plan similar to the Paris Opera House. The conical roof covers the dome of the great auditorium and the gabled roof the scene or stage.

*537 ***National Gallery and Royal Institute, Edinburgh.***

These two buildings, strongly classic in design, are marked by their simplicity and dignity of character. The cleverly planted terrace conceals the fact that the railroads pass through a tunnel underneath the gallery.

*502 ***London – Houses of Parliament.***

Imposing example of English Gothic architecture of the perpendicular style.

*556 ***Old Parliament House. Dublin, Ireland.***

This building owes its dignity of character and beauty of lines to its fine classic proportions.

*657 ***Paris, France. Palace of Justice.***

A composite of several types of architecture. The building is an attempt to harmonize and preserve fragments of historical interest.

*716 ***Gilon – Lake Geneva.***

A most successful treatment of the waterfront. Note the picturesque planting along the shore, the orderly arrangement of the railroad tracks and the terrace over these tracks in front of the Casino.

989 ***General Post Office. Sydney, Australia.***

Good public architecture. Note the arcaded passage giving increased sidewalk capacity and shelter from sun and rain.

*598 ***Palace – Stockholm, Sweden.***

This building is rather severe in its general lines, but the symmetry of composition and the planted courtyard add a softening influence. It has an important and commanding position.

615 Grand Bazaar. Moscow, Russia.

Example of modern Russian architecture. This pavilion, composed around the great arched entrance, has good proportions, and is large in scale.

614 Moscow, Russia.

The dome-surmounted towers, the arched openings and bells, are characteristic of Muscovite architecture.

610 Imperial Palace Garden – Russia.

An example of intensely decorative formal treatment. The use of separate basins for the jets at the sides leave the central basin undisturbed, thereby preserving the reflections of architecture and fountains. The formality is relieved by irregular planting of trees.

****621 Royal Palace – Berlin.***

This monumental building with the formal plaza and open spaces about it has a dignified and impressive setting.

****625 Dresden, The Zwinger.***

The plan of this building includes a fore court surrounded by galleries. The entrance on the axis of the building is marked by an architectural motive rising to two stories. The gardens within the courtyard are treated formally in contrast to the irregularity of the exterior planting.

648 Brussels. Town Hall.

The character of the building is marked by a general beauty and rhythm of architectural form.

****647 Brussels, Belgium. Palace of Justice.***

Shows the value of a site on an elevation in enhancing the power and dignity of a public building.

752 *Imperial Museums – Vienna.

These two great buildings face each other across an open plaza. Their architectural treatment being the same, gives greater power and civic beauty. Note the value of the parked vista on the dome.

755 *The Imperial Opera, Vienna.

Forceful, dignified architecture relieved by sculptured figures and decorative detail. The variation in height of parts of the building expresses by the central higher portion the great hall or auditorium, while the surrounding lower structure expresses the foyer, vestibule, offices and service.

732 *Residence – Pompeii, Italy.

Characteristic room in court surrounded by a marble colonnade and painted wall surfaces. The floors were in colored marble mosaics. The furnishings were marble sculptures, fountains and flowering planting.

738 & 739 *Milan Cathedral. Milan, Italy.

The most important example of Northern Italian Gothic (1385-1418), is built almost entirely of white marble. The character of the exterior is expressive of richness and lace-like intricacy accentuated by the many slender spires. The dome spire at the intersection of the central and cross circles was built at a later date by the architect Brunelleschi.

742 *Palazzo Ca d'Oro, Venice.

Fine example of domestic Venetian Gothic.

The fine decorative tracery of the windows and their composition is noteworthy.

740 *Doge's Palace – Venice, Italy.

This civic building has an original treatment of Italian Gothic architecture. The double story of arcades and the broad wall surface above pierced by large arched windows.

737 The Duomo – Florence.

The two remarkable features of this church are the dome and the campanile—both perfect examples of their kind. The town, built by Goths, is Gothic in style similar to the church. It stands apart from the church, which is characteristic of Italy at this period. The dome was built at a later period during the Renaissance by Brunelleschi. It retains much that is Gothic in its structural lines.

727 Rome. Library of the Vatican.

This gallery combines beauty of decoration with perfection of architectural forms.

****729 Coliseum – Rome, Italy.***

This great amphitheatre of Roman classic design is remarkable for its size and in the method of its construction. The great loads were carried on piers and arches of brick, stone and concrete. The seats, columns and interior walls were of white marble, while the exterior was faced with blocks of travertine, set without mortar and tied together with metal ties. Access to the various rows of seats was had by numerous stairways leading directly from the arched openings at the base.

****676 Madrid, Spain. Royal Palace.***

It fronts on an inner courtyard. The principal entrance is marked by the pavilion, and the whole façade is enriched by ornament characteristic of the Spanish.

****883 Railway Station. Bombay, India.***

A monumental structure built in the European style, with influence of Eastern design, as shown in the entrance arches.

*906 ***Law Court Buildings. Madras, India.***

The architecture is marked by the towers, the scalloped arches, finely detailed mouldings and latticed balustrades—all typically Oriental.

802 ***Island of Philae, Egypt.***

This group of massive stone structure was the shrine of the Goddess Isis. The great pylon, with sloping walls, led into a fore court surrounded on the west by the temple of Hattor Isis, on the east by the colonnaded house of the priests, while the fourth side conducting to the temple proper, consisted of courts and colonnaded halls. All the buildings were covered by inscriptions, both inside and out.

942 ***Grand Porcelain Tower. Peking, China.***

This building, octagon in plan, is covered entirely with glazed porcelain in various colors. The scalloped roofs and decorated projecting eaves are typically characteristic of Chinese architecture.

PARKS

*48 ***Riverside Parkway. New York City.***

The city has concluded an agreement with the railroad to cover the tracks at the water edge, and with the removal of the unsightly piers projecting into the river, the park and drive will become an acquisition of great value and beauty to the city. The treatment is informal throughout, owing to the sloping banks and irregular shore line.

*2 ***Boston Common.***

This park is irregular in arrangement and planting.

6 ***Copley Square, Boston.***

This park is small and suited to the rest and refreshment of the people in the center of the city. It is regular or formal in arrangement.

129* ***Washington, D. C.*

The Mall, President's grounds and Lafayette Square from the Monument.

130* ***Washington, D. C. The Mall from the Monument.*

Properly speaking, this park is a setting for a public building.

131* ***President's Grounds. Washington, D. C.*

This park is essentially a setting for public buildings, its landscape treatment is informal.

69* ***Niagara Falls, U. S. A. Prospect Park.*

An extensive natural park, protecting the beauty of the Falls and furnishing a recreation ground for the people. All the available shore frontage along the river should be secured for park purposes.

372 ***Ottawa, Canada.***

Park and Government Grounds.

494* ***Montevideo, S. America.*

Public Square. This park is small and suited to the rest and refreshment of the people in the center of the city; it is regular or formal in arrangement.

488* ***Buenos Ayres, South America.*

610 ***Peterhof, Russia.***

Avenue of fountains at Imperial Palace.
This park is regular in arrangement or formal.

*751 ***The Franzens Ring, Vienna.***

The public buildings face on a magnificent boulevard, which encircles the city. The formally parked open spaces in front of these buildings, give them a properly dignified and beautiful setting.

*752 ***Vienna, Austria.***

Small parks add greatly to the beauty of the city. This park is small and suited to the rest and refreshment of the people in the center of the city. It is regular or formal in arrangement.

*982 ***Melbourne, Australia.***

An informal but orderly treatment of parks and drives. The bridge is simple in design and in harmony with its environments.

WATER-FRONTS

*29 ***New York Harbor.***

The lower end of Manhattan Island is reserved as a public park. The shore line at this point is unencumbered by commercial use, and is finished by a good sea wall, walks and parking. On the west side of the park is the Aquarium.

*30 ***Water-front. New York.***

The varied and interesting sky-line of the city is here shown.

*31 ***River-front, New York City.***

A commercial utilization and growth of the water frontage. There should be a uniform system of docks, piers and warehouses fronting on a wide service road and rail connections where possible.

*33 ***Water-front. New York City.***

A system of docks; right in principle, but not uniformly developed. Eventually West Street may become a double-decked street to relieve congestion of traffic.

*48 ***Riverside Drive, New York City.***

A water-front development marred by an untidy wharf.

82 ***Atlantic City, N. J.***

A water-front devoted entirely to amusement.

12 ***Gloucester Wharfs, Mass.***

*77 ***Niagara River, U. S. A.***

The right bank shows beauty of nature strongly in contrast to the incursions of the works of man on the left. The whole water-front should be preserved as a park.

*369 ***Quebec, Canada.***

This water-front is misused both by the people and by traffic, and could not be more unbeautiful.

350 ***Manila, P. I.***

Water-front on the Passig River, which is entirely commercial in character. The native boats and the piles of merchandise tend to destroy the impression of good order.

453 ***Rio de Janeiro, Brazil.***

This water-front is affected by the needs of traffic and enjoyment of the people, but is beautiful.

*596 ***The Water-fronts of Stockholm, Sweden.***

*598 ***The Water-fronts of Stockholm.***

*649 ***Antwerp, Belgium. A well-kept water-front.***

*604 ***Copenhagen, Denmark. Freight Docks.***

*605 ***Copenhagen, Denmark.***

A perfect development of orderly shores, bridge and architectural setting.

656* ***Paris, France.*

A well-kept water-front.

665* ***Nice, France.*

The city faces the Mediterranean, its façade is framed by a beautiful palm avenue. The promenade is on the outside of the planting to give an unobstructed view of the water and of the bathers.

666 ***Port of Nice, France.***

A picturesque and orderly arrangement of a commercial port. Note the well-designed breakwaters and quays and the easy graded approach for teams to the lower level.

687* ***Seville, Spain.*

The water-front having drives or streets on both sides of the river, has invited the construction of beautiful buildings.

725 ***Rome, Italy.***

Progressive development of water-front.

748 ***Messina's water-front, Italy.***

740* ***Venice, Italy. White Swan of Cities.*

750 ***Salzburg has a beautiful water-front on the Salzach River, Austria.***

898 ***Benares, India.***

Unfortunate lack of any water-front treatment. Shores unfit for pleasure or commercial usage. The city is interesting in the mingling of its foliage and its architecture.

982* ***Melbourne, Australia. Water-front.*

MONUMENTS

***48 Soldiers' and Sailors' Monument (Grant's Tomb in the distance), Riverside Drive, New York City.**

***29 Statue of Liberty, New York.**

This monument was presented to the American people by the French government. Its massive height and location on Bedloe Island in the middle of the bay dominates both water and land. It faces the east and commands the admiration of all who enter this gateway of America.

***1 Bunker Hill Monument. Boston, Mass.**

A monumental shaft commemorating an event of national importance. It crowns Bunker Hill and overlooks Charlestown and the Bay.

***9 Minute Man. Concord, Mass.**

This monument is well placed—it is on the axis of this vista—slightly raised above the ground level and backed by foliage. Its surroundings add a note of picturesqueness.

***128 Washington Monument. Washington, D. C.**

A monument to commemorate the greatness of Washington. This severe shaft of white marble rising to the height of 550 feet dominates both city and river. It is located on a slight elevation at the intersection of the axial vistas of the Capitol and the White House.

***760 Innsbrück, Austria.**

This monument consists of a corinthian column and base surmounted by sculptured figures. It is of excellent proportion and workmanship. The character is religious, and its location one of superior judgment, being symmetrically placed to dominate the entire street.

*538 ***Scott Memorial. Edinburgh, Scotland.***

This monument, owing to the physical influences of the city, is happily situated. The street being built on but one side, permits of the placement of the mounment clear of the traffic of the street. Also it is a visual point from that part of the city lying to the left in the photo.

*653 ***Arch de Triumph, Paris, France.***

The arch is situated in one of the principal focal points of the city; a circular plaza out of which radiate twelve streets, the greatest of which is the Champs Elysées.

*704 ***Fountain. Berne, Switzerland.***

Typical fountain of the streets. The figure surrounding the shaft is accompanied by a bear, the emblem of the city. Many of these fountains have receptacles on the shafts in which are grown flowering plants.

677 ***Madrid, Spain. Cibeles Fountain***

An allegorical subject treated formally in its setting. Having a definite direction or face, it is used as a terminating vista to the street.

441 ***Statue of Bolivar. Caracas, Venezuela.***

A commemorative monument of commanding proportions and expressive of the greatness of this national hero.

*899 ***Taj Mahal. Agra, India.***

A royal mausoleum of white marble, symmetrical in form, with entrances on all sides. The interior is lighted through marble-screened openings in the second story. The decoration is obtained by the inlay of precious stones and the use of fretwork and scrolls. The formal use of water and planting is in keeping

with the symmetry of the building and contributes to its great beauty.

BRIDGES

188* ***St. Louis Bridge.*
An example of engineering skill not particularly artistic.

31* ***Brooklyn Bridge.*
View shows some of the structural steel and cables used in the support of the bridge.

32* ***Brooklyn Bridge.*
The approach to the bridge proper, showing the various divisions and levels for traffic. The stations or bridge-end treatments need architectural consideration.

25* ***Lawrence, Mass. Old type of utility bridge.*
The Falls would have greater beauty were the bridge not so close or placed at a less disturbing angle.

497 ***The Tower Bridge. London, England.***
An original treatment of the tower type of bridge. Architecturally, it is more picturesque than pure in style.

496* ***London Bridge. London, England.*
A historic crossing point of the Thames. A substantial utilitarian type of construction.

542* ***Forth Bridge. Scotland.*
An engineering triumph rather than an artistic one.

656* ***Bridges over the Seine. Paris, France.*
The Ponte des Sts. Peres in the foreground, sometimes called "du Carrousel," is a steel arched bridge in three spans. It has artistic value in the treatment of the ironwork.

The second bridge, the "Pont des Arts," is a small steel bridge used only for pedestrians. It is built with its axis on a line with the dome of the Institute.

The Pont Neuf, crossing the end of the island, is the oldest bridge in Paris, and is built of stone. The stone brackets supporting the balustrade are carved with grotesque heads.

*657 Like all the bridges over the Seine, this one, built by Napoleon III, is of good design. Its ample proportions care for the crowd of traffic at this point.

*605 ***Copenhagen, Denmark.***

An example of civic beauty and order.

The simplicity of the bridge, the continuation of the street lines, and the formal landscape treatment of the approaches are its characteristic features.

*598 ***Stockholm, Sweden. A utilitarian bridge with simple lines.***

The relation of the arch curve to the span is good.

*634 ***Heidelberg, Germany.***

Rugged old masonry bridge, military in character, with its defensive towers at the ends and the niches in the buttresses. The arches varying in size add to its picturesqueness.

703 ***Berne, Switzerland. Two types of masonry bridges.***

As to character, the lower bridge with three spans is probably more suited to use in the town proper. The great arch tends to dwarf the scale of the buildings.

741 ***Venice. Bridge of Sighs.***

A striking architectural treatment of this problem.

725 ***Bridges over the Tiber. Rome, Italy.***

The old arched bridges leading to the island have more artistic merit and their existence at the present day does credit to their construction.

TENEMENTS

*42 ***Elizabeth Street tenements, New York City.***
Unsanitary and unsightly.

FACTORIES AND OTHER CENTERS OF INDUSTRY

*119 ***Steel Works at Homestead.***
Such places as this make Pittsburgh notoriously dirty.

120 ***Steel Works at Pittsburgh.***
Some of the smudge that enshrouds a great city.

*178 ***Cotton Gins in Texas Mill.***

*15 ***Shoes at Lynn.***
Factory conditions that are bearable, if not all that could be desired.

17 ***Sorting Wool.***
Some industries are naturally conducive to untidiness.

*18 *19 *20 21 *22 23 *24 ***Wool in Mass.***
Plenty of light and breathing space go a long way toward making a sanitary factory.

*25 ***A Factory at Lawrence, Mass.***
Clean, well-kept and practical.

*154 155 *156 *157 *158
Factory conditions that are generally good; but note the child labor in the spinning room. Olympian Cotton Mills, Columbia, S. C.

467 Factory conditions in Lima, Peru, are not bad. Cotton Mill.

*210 *211 Beet sugar factory at Menominee, Michigan.

SUB-CLASSIFICATION FOR TOPICAL STUDY

Here are grouped for more convenient reference, the numbers referring to particular topics not indicated in the main headings above. Reference should be made to the explanatory notes given above.

ARCHITECTURE—REGULARITY.

*33, *452, *493, 500, *573, 622, *654, *655, *751, *807.

ARCHITECTURE—IRREGULARITY.

34, 36, *38, 39, *40, 41, *3, *131, *189, *351, *607, *760, *830, *929, *983.

STREET LIGHTING—GOOD.

34, 39, *40, 41, *42, *3, *131, *189, *212, *452, 500, *538, *556, *561, 597, *607, 622, *655, *751, *983.

STREET LIGHTING—BAD.

*493, *679, *807, *782.

STREET PAVING—GOOD.

*33, 34, 36, 39, 41, *3, *131, *212, *342, *452, *493, 500, *538, *561, *573, 597, *607, 622, 623, *654, *655, *679, *751, *782, 892, *983.

STREET PAVING—BAD.

*189, *351, *556, *807, *830, 939.

STREET PLANTING.

*131, *452, *493, *538, 597, 622, 623, *654, *655, 677, 750, *751.

STREET TRAFFIC.

*3, *40, *42, *189, *342, *496, 500, *538, *556, *573, *807, *655, *561, 597, 622, *33, 41, *131, *212, *351, *607, 677, *760, *830, 846, 623, *983.

WIRING—OVERHEAD.

*3, *189, *212, *342, *351, 455, *493, *556, *573, 597, 623, 677, *807, *830, 892, *983.

WIRING—UNDERGROUND.

34, 36, *38, 39, *40, 41, *452.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

ENGLISH COMPOSITION

BY

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887 STEREOGRAPHS OR SLIDES WITH 1043 REFERENCES TO THEM.

The subjects here selected for use in English composition are not all that can be used to advantage in this way; but they represent some of the best material from the 1,000 collection for the purpose. Nearly every teacher has found how difficult it is for children of any age to write or express themselves coherently without some concrete object or experience to stimulate and centralize the thought. But let the teacher give the child a stereograph of Lee's old home at Arlington, for example, and tell him to describe it, and he has something real and concrete to describe, whether orally or on paper. Or give the child a stereograph of excursionists returning to New York City on a steamer, and there

is a concrete and distinct experience to quicken the thought and stir the imagination, and the child who could not ordinarily write a narrative of twenty-five words will surprise himself as well as the teacher.

The chief value of the stereographs for composition work lies in their suggestiveness. By the use of them the knowledge and experience of the children may be called vividly to mind and new interests and problems may be developed. Composition, it should be remembered, is primarily the getting together of ideas. Spelling, punctuation, and the like must wait upon thought. Hence, any material so thought-provoking as stereographs of striking objects and processes is full of possibilities for good speaking and writing. How certain kinds of stereograph scenes may be employed to the best advantage will be briefly indicated under the various class headings.

These class headings are supplied chiefly to facilitate ease of reference. Doubtless, teachers will often find quite other uses for the stereographs than those suggested.

Publishers' Note

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations for *English Composition* the teacher

is referred to the wider range of material to be found in our general catalogue, and to our regular Travel tours on the different countries, particulars of which will be sent on application.

NARRATION

PERSONAL EXPERIENCES

This group of stereographs makes possible a number of interesting visits and adventures which will arouse the imaginations of the pupils and set them to recalling the most memorable occasions in their own lives. Through oral and written narrative each should contribute what he can to the exercise of the hour. Older pupils may be required to inform themselves concerning the places depicted and then tell the story which the stereograph scene suggests. The teacher should always willingly bear his part in giving these accounts.

1 A visit to Bunker Hill Monument, Boston.
*2 The State House and the Common, Boston.
*10, 11 Among the sand dunes on Cape Cod.
*30 Excursionists returning to New York City on a steamer.
*38, 39 A visit to downtown New York City.
*49, 50, 51, 52, 819, 820, 827 A visit to Bronx Park and the Zoo, N. Y. City.
*45, 46, *47 A visit to Ellis Island, New York Harbor.
*48, *54, 55, *56, *57, 58, *80 A trip up the Hudson River, New York.
82, *83 A day at Atlantic City, N. J.
*128 to 140 (8 are starred) A visit to Washington, D. C.

*225 In the great lumber yards at Minneapolis, Minn.
235 to *243 (5 are starred) A trip through Yellowstone Park.
*252 A visit to Box Canyon, Colorado.
*254, 255 A visit to the cliff dwellings of Colorado.
*257, 258 *259 On a great Western ranch, Arizona.
*261 to *264 Among the Indians in Arizona.
*265 to 268 (3 are starred) In the copper country of Arizona.
*274 to *278 (2 are starred) In the Grand Canyon, Arizona.
*288 to *292 (3 are starred) In the Yosemite Valley, California.
*312, *313 Mountain climbing in Washington, U. S. A.
*316 A visit to a village in Alaska.
317 In far north Juneau, Alaska.
*318 Among the icebergs in Taku Inlet, Alaska.
326 A holiday jaunt in a horseless carriage, Porto Rico.
341 to *347 (5 are starred) A trip to Hawaii.
*349 to *363 (10 are starred) In the Philippine Islands.
*389 to 397 (6 are starred) A visit to the Arctic regions.
*398, 399, *400, 401, 405, 413 Experiences in Mexico.
*447, 448, 449, *450 A visit to Santa Marta and Barranquilla, Colombia, S. America.
*451, *452, 453 A visit to Rio de Janeiro, Brazil.
479, 480 To the top of El Misti, Peru.
*487, *488, *489 A visit to Buenos Ayres, Argentine.
*492, *493, *494 At Montevideo, Uruguay.
532 Narrow streets and quaint houses of Shrewsbury, England.
*495 to 508 (9 starred) A visit to London.
*505 At the coronation of England's King, London.
511 A visit to Oxford University, Oxford, Eng.
515 Quaint cottage homes of Shanklin, Isle of Wight, Eng.
*537, *538, 539 In Edinburgh, Scotland.
*556 In Dublin, Ireland.
*557 to *561 (all are starred) Around Belfast.

*579, 580 At Odde, Norway.
*596 to 599 (2 are starred) In Stockholm, Sweden.
*604, *605 At Copenhagen, Denmark.
*613, 614, 615 In Moscow, Russia.
*621, 622, 623 A visit to the German capital.
636 On the Rhine near the Lorelei Rocks, Germany.
*639, *640 In Amsterdam, Holland.
*653 to *659 (6 are starred) A visit to Paris.
*665, 666 At Nice, France.
*672 A day on the beach at Dieppe, France.
*676, 677 In Madrid, Spain.
696 A stop at Funchal, Madeira Islands.
*698 to 702 (4 starred) Around old Lucerne, Switzerland.
703, *704 A visit to Berne, Switzerland.
717 Up among the dizzy heights of the Alps, Switzerland.
718, *719 Up Mont Blanc, Switzerland.
725 to *729 (3 are starred) In Rome, Italy.
*736, 737 At Florence, Italy.
*740, 741, *742 In Venice, Italy.
*743, *744 Some experiences in Sicily.
*751 to *755 (3 are starred) A visit to Vienna, Austria.
*761 to *767 (5 are starred) A visit to Athens, Greece.
*777 to 784 (4 starred) In and around Constantinople.
*786 to *796 (5 starred) A visit to Cairo and the Pyramids, Egypt.
*805 to 808 (2 starred) A day at Algiers.
846, 847 At Jerusalem.
*857 to *860 Experiences at Damascus, Syria.
*881, 882 A visit to Bagdad.
892 to *897 (2 are starred) In Calcutta, India.
901, *904 At the Durbar in Delhi, India.
*928 Visiting the boat population of Canton, China.
930, *931 In Shanghai, China.
937, *943 In Peking, China.
*956, 958 To the top of Mount Fuji, Japan.
976, *977 Experiences on Aso-San volcano, Japan.

EXPERIENCES OF OTHERS

The stereographs in this group will lend themselves to the method of treatment outlined above, namely, that of having each pupil work up a subject and then narrate the experience of the chief actor or actors. In some instances the narrative may be in the first person. In such cases it will be well to have the pupil decide upon a time and place for the narrative and upon the character of the audience. In other cases the narrative may be in the third person and partake more nearly of the nature of a historical account. Of course the teacher will aid the pupils in gathering information and in sifting out the necessary facts.

*3 Washington street and Old South Church, Boston.
26 Up around Webster's old home, Franklin, N. H.
*44 People from rural New Jersey coming to New York City by ferry.
*61, 62 Life-saving corps on Long Island Beach.
84 A glorious May-day among the daisies.
85 Huge oil tanks on fire at Bayonne, N. J.
145 Battleship fleet starting on the world tour in 1907.
*166 Hauling logs over pine-grown sands of Florida.
*169 Enjoying life in wheel-chairs amid tropical surroundings, Palm Beach, Florida.
172 Rapid transit in southern Mississippi.
*253 In the Rocky Mountains, Colorado.
*259 Cowboys examining the brand of a yearling to settle ownership, Arizona.
*325 Aguadilla, where Columbus first landed in Porto Rico.

329 Native life in the interior of Panama.
*349 Manila Bay, P. I.
*352 American Army encamped at Manila, P. I.
374 Portage of the Muskoka river, Canada.
*386, *387 In the mining country of the Klondike.
*422 Wreck of the Battleship Maine, Havana Harbor, Cuba.
*423, 424, 425 Morro Castle and site of the Battle of Santiago, Cuba.
*426 Birth of the Cuban Republic.
*427 American Army encamped south of Santiago, Cuba.
510 After the races at Henley, England.
516 After a hard run with the otter pack, Wiltshire, Eng.
541 Tantallon Castle, Scotland.
*572 En route to "The Land of Promise".
610, 611 The Imperial Palace and grounds at Peterhof, Russia.
612 The Royal Yacht of Russia at St. Petersburg.
*687 Seville and the Guadalquiver River, Spain.
688 A bull fight at Seville, Spain.
697 The Falls of the Rhine and Laufen Castle, Switzerland.
709 The road winding down the Maloja Pass into Italy.
715 At the world-famed monastery of St. Bernard, Switzerland.
*768 The battlefield of Marathon, Greece.
770 Agamemnon's Council chambers at Argos, Greece.
*771 Over modern homes in ancient Sparta, Greece.
772 In the great Langada Pass, Greece.
774 Battlefield of Thermopylæ, Greece.
809 Ivory on the way from the jungle to America.
810 A zebra hunt in Africa.
*830, *832 British soldiers in South Africa.
*835 With Lord Roberts in South Africa.
838 In Zululand, South Africa.
852 Joseph's Well at Dothan, Palestine.
947, *948, 949 Around Port Arthur, Manchuria.

*952 Awaiting an attack by Russian Cavalry; Japanese soldiers in a trench near Port Arthur.
953 Roosevelt and envoys of the Mikado and the Czar on the *Mayflower*

DESCRIPTION

SCENERY

Descriptions of scenery should aim not at photographic accuracy but at emotional effect. Hence, the pupils must be trained to avoid cataloguing the objects to be seen in the stereographs and to choose instead those suggestive phrases which will call up images and convey impressions. In doing this it will be well to find and have the children find descriptions in books which deal with similar subjects in a literary way. The class may then try to see how the author succeeded in appealing to his readers.

*25 Falls in the Merrimac, Mass.
*27 In the charming White Mountains, New Hampshire.
*54 North up the Hudson River from West Point, N. Y.
65 Fairy Cascade in Watkins Glen, N. Y.
69 to 74 (3 are starred) The Falls of Niagara, New York.
75 Great mass of frozen spray at Niagara Falls, N. Y.
*76, *77 Down at the gorge below the Falls, Niagara.
*79 A drive through a forest of crystal, Prospect Park, Niagara Falls.
*108 The Delaware Water Gap, Pennsylvania.
146 Natural Bridge, Va.

147, *148 In the Luray Caverns, Va.
163 In the Florida jungle.
*164 Race-track at Ormond Beach, Florida. –
202 On the shores of Lake Michigan.
*223 Beautiful Dalles of Wisconsin.
242 Lower Falls of the Yellowstone from Point Lookout.
*243 Ten miles of yawning chasm in the Yellowstone Cañon.
244 Gray's and Torrey's Peaks from Mt. McClellan, Colorado.
*245 Snow-streaked Mummy Range in Colorado.
*250 In the Royal Gorge of Colorado.
251 Marshall Pass in the Rocky Mountains, Colorado.
*269 Cañon Diablo, Arizona.
*282 Magnolia Avenue, Riverside, California.
*288 Looking down the Yosemite Valley, California.
290 N. W. from Glacier Point, in Yosemite Valley, California.
*291 Overlooking Nature's grandest scenery, Yosemite Valley.
*292 From Clouds' Rest in Yosemite Valley to the distant Matterhorn of the Sierra Nevada Mountains, California.
302 Everlasting snow on Mt. Hood, Oregon.
*311 Mt. Tacoma, Washington.
*314 The sun-scarred face of Nisqually Glacier on Mt. Tacoma, Wash.
*332 Overlooking Pacific entrance of the Panama Canal.
379 The "Three Sisters" from the Bow Valley, Alberta, Canada.
*380 Beautiful Valley of the Bow River, Alberta, Canada.
*381 The placid waters of Lake Louise and Mt. Victoria, Alberta, Canada.
382 At the base of Mt. Stephens, B. C.
*383 Roger's Pass in Canadian Rockies.
*384 The great Illicilewaet Glacier, British Columbia.

402 Over Ameca to Ixtaccihuatl, Mexico.
*403 From Puebla to Popocatapetl, Mexico.
*460 Ice-crested Chimborazo, Ecuador.
465 Pichincha's Peak, rising 15,706 feet on the Equator, Ecuador.
*476 Pacific waves on the rock-ribbed coast of Peru.
479 Threatening majesty of El Misti, Peru.
*486 In the Straits of Magellan.
*518 The boundless ocean from the cliffs at Land's End, England.
*524 Charming country around Ludlow, England.
536 Fairy Glen, Bettws-y-Coed, Wales.
*548 The winding Forth River, Scotland.
*549 North from Stirling Castle toward the Highland, Scotland.
550 West from Stirling Castle up the Valley of the Forth, Scotland.
551 Ben Venue, from across Loch Achray, Scotland.
*555 Over beautiful Enniskerry, Ireland.
565 The splendid cliffs of Menawn, S. E. across Keem Bay, Ireland.
*570 Magnificent cliffs at Loop Head, Ireland.
*571 Lower Lake of Killarney, Ireland.
575 Snowy heights of Mt. Gausta, Norway.
*576 Rjukanfos Falls, Norway.
*577 Beside the Vrang Falls—the Bandak Nordsjo Canal, Norway.
581 At the foot of the cliffs, where the Skiæggedals Falls leap 525 feet, Norway.
*585 Gudvangen's outlook over the Naerofjord, Norway.
*592 Down the Vidde Valley, Norway.
*595 The Midnight Sun in July over cliffs of Spitzbergen, Norway.
*600 On a hillside overlooking Rattvik, Sweden.
603 The Toppo Falls at Trollhattan, Sweden.
619 The winding Dnieper River, Russia.

*631 The great Watzmann on the Konig's See, Bavaria, Germany.
*632 Neuschwanstein from the heights, Bavarian Alps.
*633 Upper valley of the Danube, Germany.
*634 Heidelberg and the Neckar River, Germany.
*635 From Ehrenfels Castle across the Rhine to Bingen, Germany.
637 From Coblenz across the Rhine, Germany.
*646 Miles on miles of peaceful pastures where windmills beckon to each other, Holland.
*667 Glacier-covered heights of the Pyrenees, France.
670 On the rock-bound coast of Finisterre, France.
*684 The Alhambra and snowy Sierras, Granada, Spain.
*700 The backbone of Europe from the summit of Pilatus, Switzerland.
*705 The Jungfrau, Switzerland.
*713 The charming Zermatt and the Matterhorn, Switzerland.
*716 Lake Geneva and the Dent du Midi from the village of Glion, Switzerland.
*724 The picturesque Chamonix Valley, Switzerland.
750 Salzburg and the winding Salzach, Austria.
757 The Drei Zinnen from Lago Misurina, Austria.
*758 An Austrian hamlet, Val Ampezzo.
759 The Ortler, from Trafoi, Tyrol, Austria.
775 North from Pharsala over the Plain, Greece.
802 Over the island of Philæ, Egypt.
*831 Over the South African veldt.
*828 The Cape of Good Hope.
849 The Wilderness of the Scapegoat, Palestine.
*863 The Highlands of Moab, Syria.
872 The Cedars of Lebanon and Mt. Lebanon, Palestine.
*874 Traditional Garden of Eden on the Euphrates River.
*885 The Vale of Cashmere in India.
*891 Up to the everlasting snows of Mt. Kinchinjanga, India.

*921 Charming valleys and mountains in Ceylon.
*956 Mount Fuji, Japan.
*964 Cryptomerias on road to Nikko, Japan.
*967 Under the bamboo trees in Japan.
*970 Over a beautiful Japanese garden.
*975 Over a rice field in the crater of Aso-San, Japan.
*982 Over Melbourne, Australia.
*987 A fertile valley in Australia.
996 Mount Elliot, New Zealand.
998 Avenue of canary trees in Botanical Gardens of Buitenzorg, Java.

PLACES AND OBJECTS OF INTEREST

The stereographs in this list have been grouped because each makes accessible some place or object which has special historical or other significance. The class may try to explain offhand what this significance is, and thus obtain practice in impromptu composition, or they may search for the necessary information and undertake to arouse the class to a proper appreciation of the place or object. In doing this they should be encouraged to try various devices of composition without regard to any particular "form of discourse." For example, a pupil may tell why he would enjoy living in a house such as that seen in 526, or why he would like to visit the birthplace of Robert Burns.

*4, *5 Interior and exterior of Faneuil Hall, Boston.
*7 The old home of Henry W. Longfellow, Cambridge, Mass.

8 The old home of James Russell Lowell, Cambridge, Mass.
9 The North Bridge and Statue of the "Minute Man" at Concord, Mass.
*29 Castle Garden and Aquarium, S. W. over Statue of Liberty and New York Harbor.
34 The Flatiron Building, past Madison Square Garden to Williamsburg Bridge, N. Y. City.
35 From Metropolitan Tower south to the Singer Bldg., and New York Harbor.
*40 Looking north over Herald Square and the 6th Avenue Elevated R. R., N. Y. City.
*42 Tenement houses on Elizabeth Street, New York City.
*56 Washington's Headquarters at Newburgh, N. Y.
106 Independence Hall, Philadelphia, Pennsylvania.
*107 View south to Round Top, Gettysburg battlefield, Pennsylvania.
*153 Fort Sumter in Charleston Harbor, S. C.
*159 The greatest resin market in the world—wharfs at Savannah, Ga.
162 Oldest house in the United States—St. Augustine, Fla.
*173 On the sugar levee at New Orleans, La.
184 Confederate signal station, Lookout Mountain, Chattanooga, Tenn.
*186 Lincoln's birthplace at Hodgensville, Kentucky.
*188 The levee at St. Louis, Missouri.
*236 Fort Yellowstone in Yellowstone National Park.
*249 Nightingale Gold Mine at Cripple Creek, Colorado.
*293 A majestic triumphal arch—cavalry passing through the great tree, "California," Cal.
*321 Public School in Porto Rico.
322 A suburban home in Porto Rico.
328 The city of Panama.
*331 Rural Panama.
*364 Yarmouth Harbor at high tide, Nova Scotia.
*365 The historic village of Grand Pre, Nova Scotia.

*366, 367 Perce Bay, Quebec.
*369, 370 Quebec on the St. Lawrence River, Canada.
*371 Montreal, Canada.
*386, *387 In the Klondike gold country.
388 At Vancouver, B. C.
*389, *391, 392, *394 In the Arctic region.
409 Public washing fonts at Jalapa, Mexico.
410 Hall of Mosaics, ruins of Mitla, Mexico.
*442 The bread-mule in Caracas, Venezuela.
446 A lumber yard in Maracaibo, Venezuela.
*482 Straw boats on Lake Titicaca, Peru.
*495 The Albert Docks on the Thames at London.
*513 Chalk cliffs at Dover, England.
*514 On the sands at Southsea, England.
*524 River Teme and green country around Ludlow, England.
*525 In Shakespeare's home, Stratford-on-Avon, England.
*526 Anne Hathaway's cottage, at Shottery, England.
530 Dove Cottage, old home of Wordsworth in Grasmere, England.
531 Romantic ruins of Furness Abbey.
*540 Melrose Abbey, Scotland.
*546 Birthplace of Robert Burns at Ayr, Scotland.
*547 Stirling Castle, Scotland.
552 The "Brig O'Turk" in the Trossachs, Scotland.
*553 Ellen's Isle in Lake Katrine, Scotland.
*554 Queenstown, Ireland.
*562, 563, 564 The Giant's Causeway, Ireland.
568 Fireplace in a home in Ireland.
*569 Picturesque home of a farmer in Ireland.
574 Old Viking ship in Christiania, Norway.
583, *586, *587, *590, *591 Norway glaciers.
*584 Bergen and its harbor, Norway.
*624 The Kiel canal, Germany.
641 The church at Delftshaven, where the Pilgrims prayed before leaving Holland for America.

652 The "Field of the Cloth of Gold," France.
*653 The Arch of Triumph in Paris.
664 The battlefield of Sedan, France.
*669 Interior of a Breton village home in France.
673 The Ducal Palace at Monaco.
678 The bridge and Flying Ferry at Portugalete, Spain.
*679, *680 Valencia, Spain.
689 Cadiz, Spain.
693 The castle of St. George and city from the Tagus, Lisbon, Portugal.
695 Old aqueduct that brings water 15 miles to Lisbon, Portugal.
*698 Lucerne and lofty Pilatus, Switzerland.
*699 An Alpine elevator to the top of Pilatus, Switzerland.
*710 Fiescher Glacier, Switzerland.
711, 712 Aletsch Glacier, Switzerland.
*721, 722 The great Mer de Glace, Switzerland.
723 Boulders on the bosom of the Mer de Glace, Switzerland.
*730, *731 Naples and Vesuvius, Italy.
733 Amalfi and the sea, Italy.
*734, 735 Marble quarries at Carrara, Italy.
745 A fifth century theatre, Sicily.
*760 The principal street of Innsbrück, Tyrol.
*764 On the Acropolis at Athens.
779 In St. Sophia at Constantinople.
*785 The Suez Canal.
*801 The Nilometer at the first cataract of the Nile, Egypt.
*814 The beginning of the Nile River, East Africa.
*815 The throne room in the Sultan's palace, Zanzibar, East Africa.
*821 Victoria Falls, East Africa.
825 Forest trail in the heart of Africa.
841, *842 Oasis in a desert, Sinai.
*855 The springs at Dan, Palestine.

873 to *876 (3 are starred) At Babylon and along the Euphrates River.
877, 878, 879, *880, *881, 882 Strange sights at Nineveh and along the Tigris River, Mesopotamia.
898 Benares on the bank of the Ganges River, India.
905 An Indian "reet" or bullock carriage at Ulwar, India.
940, 941 The "Forbidden City" in Peking, China.
*944 The Great Wall of China.
945 Chinese junk under full sail on the Yellow Sea.
*946, 951 Port Arthur and the harbor.
*961 The cherry blossoms in Shiba Park, Tokyo, Japan.
979 The suburbs of Seoul, Korea.
986 Dalgetty's salesrooms, where wool buyers come from all parts of the world, Australia.

ART AND ARCHITECTURE

Composition is an art and has principles of structure analogous to those of architecture. Hence, the teacher who will secure and read a few of the numerous guides to pictures and to architecture which are now to be had may lead his pupils to understand and enjoy the art of good writing by a method no less effective because indirect. There is here, also, a typical opportunity for teaching a vocabulary peculiar to a certain field of human interest and endeavor. Let the pupils learn how to give a correct description of a Gothic church, and how to compare Notre Dame with St. Paul's.

6 The public library on Copley Square, Boston.
37 The Woolworth Bldg., in New York City.
58 The State Capitol Bldg., at Albany, N. Y.

*132 The United States Capitol at Washington, D. C.
135 In the Supreme Court Room, Washington, D. C.
136 Decorative splendor of entrance hall, Congressional Library, Washington, D. C.
*137 The White House, Washington, D. C.
141 Gen. Lee's old home at Arlington, Va.
142 Christ Church, Alexandria, Va.
*143 Mount Vernon, home of Washington, Va.
328 The Cathedral in Panama City.
372 The government building at Ottawa, Canada.
*398 The Cathedral in Mexico City.
*428 Courtyard of typical Cuban home.
462 One of the massive aisles in La Compania Church, Ecuador.
497, *498 The new Tower Bridge and the Tower of London, England.
*504 Westminster Abbey, London.
*509 Windsor Castle, England.
*512 Interior of Canterbury Cathedral, England.
*517 Ancient Elizabethan house at Exeter, England.
*529 Nave of Durham Cathedral, England.
*598 Royal Palace, Stockholm, Sweden.
*608 St. Isaac's Cathedral, St. Petersburg, Russia.
*625 The Zwinger, Dresden, Germany.
*632 Neuschwanstein Castle, Bavaria, Germany.
*638 The great cathedral at Cologne, Germany.
*647 Palace of Justice, Brussels, Belgium.
648 Town Hall of Brussels, Belgium.
*653 The Arch of Triumph, Paris.
*659 Notre Dame Cathedral, Paris.
660 Gallery of Battles in the Palace at Versailles, France.
662, *663 Rheims Cathedral, France.
675 Aqueduct of Trajan's time, Segovia, Spain.
*685 Court of the Lions in the Alhambra, Granada, Spain.
694 Court and beautiful cloisters of Sao Jeronymo Convent, near Lisbon, Portugal.

727 Interior of Vatican Library at Rome.
*728 The ruins of the Forum at Rome.
*729 The Coliseum at Rome.
732 Beautiful home of the Vetii at Pompeii, Italy.
737 The Cathedral of Florence, Italy.
*738, 739 The beautiful Cathedral at Milan, Italy.
*742 Palazzo Ca d'Oro in Venice, Italy.
*751 Franzens Ring at Vienna, Austria.
*752 The Imperial Museums, Vienna, Austria.
*755 Imperial Opera House, Vienna, Austria.
763 Temple of Nike, Athens.
*764, *765 The Parthenon at Athens.
*767 The temple of Olympian Zeus at Athens.
770 Agamemnon's Council Hall at Argos, Greece.
790, 791, 793, 794 The Great Pyramid at Gizeh, Egypt.
800 Temple of Luxor in Egypt.
*883 Railway station at Bombay, India.
*899, 900 The Taj Mahal, India.
942 Grand Porcelain Tower in Peking, China.
*962 Interior of Count Okuma's home in Tokyo, Japan.
989 General Post Office building at Sydney, Australia.

CONSTRUCTION

This group calls for a good deal of mechanical interest and knowledge, and will be found of special value to boys who like to make things. It is probable that only a few of the older pupils will be able to speak or write successfully about these subjects.

*31, *32 Brooklyn Bridge, New York City.
*43 Building a great steel skyscraper, New York City.
53 Electric locomotive train with overhead cables, New York.
*60 Curtis in his bi-plane, Mineola, N. Y.

*78 In the great power plant at Niagara Falls.
81 Great freight escalators on Bergen Hill, New Jersey.
*127, *915 Great oil pumps at work in the oil fields of western Pennsylvania and in Burma.
*174, *187 End-wheel steamboats on the Mississippi River.
*206, 207, *208 The locks of Sault Ste. Marie, Michigan.
*229 A 5-ton steam shovel in an open pit mine in Minnesota.
*233 Docks with two miles' frontage at Two Harbors, Minn.
333 to *340 (4 are starred) Panama Canal and Gatun Locks.
*472 Railroad bridge in the Andes Mountains, Ecuador.
*490 Cog Railroad at Los Andes, Argentine.
*496 London Bridge from the Surrey side.
497 The new Tower Bridge, London.
535 The curious suspension bridge at Conway, Wales.
*542 The Great Forth Bridge, Scotland.
*560 Building an ocean liner at Belfast, Ireland.
769 The Corinthian Canal, Greece.
*803 The Assuan Dam, in Egypt.
*980 Building a house in Korea.

PEOPLE—THEIR DRESS AND MANNERS

The suggestions made above with regard to bringing to expression the pupils' own life and with regard to the looking up of the facts necessary to amplify the places or objects seen in the stereoscope apply here. Older pupils may compose specific narratives, supplying time, place and circumstances for some of the stereographs.

59 Digging potatoes on a Long Island farm.
*138 President Wilson and his Cabinet.
139 Admiral Dewey and fellow officers in Washington, D. C.

*170 Colored students plowing at Tuskegee Institute, Ala.
*171 Booker T. Washington and guests at Tuskegee, Ala.
*192, *194 Some of the original inhabitants of America.
*348 Our Samoan cousins.
*356 People of Ermita, P. I.
390, *393 People of the Arctic.
*404, *412, 415, *416 People of Mexico.
*456, *458, *459, *461, *464 People of Ecuador.
*475 South American Indians in Peru.
477 On a country road in Peru.
*542 Scotch Highlanders in the famous kilts.
*566 People on the Island of Achill, Ireland.
*567 Irish lads in the peat bogs of Ireland.
*578 A farmer's family at Roldal, Norway.
*593 Lapp family in their native home.
*594 Bridal party in costume in Norway.
*601 A farmer's family at Lerdal, Sweden.
*602 Happy throngs at the Vorfest in Jonkoping, Sweden.
*618 Russians at their country home.
*626 German women hoeing sugar beets, Germany.
627 Dressing dolls in Germany.
*642 Industrious peasants with milk cart—Holland.
643 Substantial dignity of a Dutch matron in her dog cart, Holland.
*644 Quaint costumes of village girls at Zuider Zee, Holland.
*645 Picturesque country women with pails balanced on yokes, Goes, Holland.
671 Autumn in Brittany, France.
674 On a farm in Spain.
*756 School children's morning devotion in Austria.
*758 An Austrian hamlet, Val Ampezzo.
*782 In Constantinople.
787 A crowded street in Cairo, Egypt.
*811 Kikuyu women in East Africa.
*816 People of a Wachagga village in East Africa.
*818 The Safari, East Africa.

823 A new river settlement near the Equator, Congo Free State.
825 On a forest trail in East Africa.
826 The Pigmies of the Congo.
*844 The bazaar of Jaffa, Palestine.
846 On Christian Street in Jerusalem.
850 Bedouins on north shore of the Dead Sea, Palestine.
853 Life on the shore of Galilee, Palestine.
*881 Strange round boats and pontoon bridge used on the Tigris River, Mesopotamia.
*884 School boys of Amritsar, India.
888 Hindus on the river Sutlej in India.
890 Bhutanese milkmen at Darjeeling, India.
*903 Devout Mohammedans at prayer, Delhi, India.
911 At a Buddhist funeral, Mandalay, Burma.
*912 Burmese natives searching for rubies, Mogok, Burma.
916 Natives on a timber raft on the Irrawaddy River, Burma.
918 Goldsmiths of Kandy, Ceylon.
*920 Natives harvesting rice in China.
*929 Mission children in Canton, China.
933 Natives of Interior China.
*943 Bride and groom in costume, China.
954 Japanese lady in a rickshaw, Japan.
*960 Burden-bearers of Japan in Tokyo.
963 Japanese family at dinner in Japan.
965 Japanese lady in a yama-kago, near Nikko.
*973 Girls picking tea in Japan.
*981 Boys and men in school in Seoul, Korea.
*990 Sons of aboriginal Australians.
993 Girls of the old Maori race in Auckland, New Zealand.
*997 Sudanese in Garoet, Java.
*1000 Fiji Islanders.

PRODUCTS

These subjects should be handled in the recitation in geography. It should be remembered that much of the best composition work consists in excellent, well thought-out and well-expressed recitations in the various classes. Little is accomplished in English when it is not taught throughout the school day.

*167, *168, 324 Cocoanuts.
*193 Corn in Kansas.
*279, *280, *281 Oranges in California.
*293 to *299 (5 are starred) Big trees of California.
*323 Pineapples in Porto Rico.
*344, *407, *408, *434 Bananas.
*404 Pulque from the maguey plant, Mexico.
418, *419, *457 Cocoa beans.
433 Citron.
*686 Dates in Spain.
*691 Malaga grapes.
*744 Lemons in a grove in Sicily.
*897 A banyan tree.
*934 Cultivated bamboo.

PROCESSES

See the suggestions under Products

*15, *16, *628, *629 Processes in the making of shoes.
140 Printing money at Washington, D. C.
*200 Cutting corn with reaper, Michigan.
300 Polling logs in McCloud River, California.
*303 Irrigating a strawberry field in Oregon.
*304 Floating timber down the Columbia River.
*305 Logs shooting down a mountain side, through a 350-ft. flume to the water, Oregon.

*309 Modern American reaper and binder at work in Washington.
310 Picking red raspberries in Washington.
362 Filipino saw mill on Island of Cebu.
*386 Gold miners at work in the Klondike.
*355, 415 Making rope.
*416 Making matting in Mexico.
*435 Crude method of grinding sugar cane.
*469 Irrigation in Peru.
*527 Unloading and stacking hay in England.
528 Using a motor plow in England.
*558 Hatcheling flax.
*567 Cutting peat in a bog.
*578 Making hay in Norway.
606 Packing prize butter in Denmark.
*609 Making hay in Russia.
*620 Turning up salt in Russia.
*650, *651 Curing flax in Belgium.
658 Making Gobelin tapestry.
*668 Collecting salt for stacks, France.
690 Stacking salt in Spain.
*783, 784 Making oriental rugs in Constantinople.
*797, *798 Irrigation in Egypt.
*799 Threshing in Egypt.
845 Plowing in Palestine.
*851 Grinding out flour in Palestine.
*861 Making bread in a Syrian home.
*862 Churning in Syria.
*875 Drawing water from the Euphrates River to water the fields.
879 Making sun-dried bricks in Mesopotamia.
*886 Shelling rice in India.
*887 Shawl weaving in Cashmere, India.
889 Making road at Darjeeling, India.
*908 Handling freight in Rangoon, Burma.
917 Washing rubies in Burma.

919 Grinding moonstones with primitive lathe—Ceylon.
*932 Unloading tea at Hankow, China.
*955 Heading millet in Japan.
968 A potter fashioning a vase on his wheel.
*969 Decorating cloisonné, Japan.
*971, *972 Transplanting rice in Japan.
*974 Flailing barley in Japan.
978 Coaling a steamship.
*985 Shearing sheep by electricity in Australia.

ANIMALS

See the suggestions under Products

*63, 64 Whale on the beach on Long Island, N. Y.
191 Tame deer on a ranch in Missouri.
*201 Prize-winning sheep in Jackson, Michigan.
*216 Feeding the pigs.
217 Steers grazing in pastures in Illinois.
*225 A work-horse in Minnesota.
*238 Bison in Yellowstone National Park.
239 A bear in Yellowstone National Park.
275, 277, *403, *461 Burros.
*273, *442 Mules.
*287 Young seals on beach at Santa Catalina Island.
*357, *363, 914 Water buffalo.
*358 Caraboa in the Philippine Islands.
*473, 477 Pack trains of llamas in the Andes, Peru.
*543 Fine sheep in Scotland.
544 Highland cattle in Scotland.
*569 Farm animals at a country home in Ireland.
*582 Reindeer herd in their native haunts.
*586, *743 Goats.
*593 A family reindeer in Lapland.
643 A harness dog of Holland.
664, 757 Cows in pasture.
*676 Military horses in Madrid.
788, *789, 790 Camels.

810 Zebras (dead) in East Africa.
850 Arabian horses in Palestine.
894 Snakes exhibited on the streets in Calcutta, India.
*895 Hindu cows in Calcutta.
896 A huge tiger in India.
905 Bullock in India.
907, 923 to *926 (2 are starred) Elephants in Ceylon and Burma.
984 A boxing kangaroo in the Zoo at Melbourne, Australia.
*987 Beautiful specimens of horses in Australia.
991 5,000 thirsty sheep in Australia.

FISH

See the suggestions under Products
*307, 308 Salmon in northwestern United States.

BIRDS

See the suggestions under Products
*165 Pelicans on the Pelican Islands off coast of Florida.
*283 Ostrich on farm in California.
*286 Gulls on San Francisco Bay, California.
*368 Gannets on the St. Lawrence River.
*394 Auks on the west coast of Greenland.
533 Song thrushes and their nest.
534 Goldfinch, its nest and eggs.

DISASTERS

Some pupils may be able to present thrilling personal accounts. Others may relate the actual happenings depicted in the stereographs. Still others may recall various similar horrors and may discuss means of prevention and relief.

14 Scene of the "Wreck of the Hesperus," Cape Ann, Mass.
118 The Johnstown Flood, Pennsylvania.
176 Floating wreckage after the flood at Galveston, Texas.
185 After the tornado in Louisville, Kentucky.
190 The flood in Kansas City, Missouri.
*284, 285 Earthquake in California.
*436 to 439 (3 are starred) Eruption of Mont Pelee and destruction of Martinique.
748, *749 Earthquake at Messina, Italy.

WORLD WONDERS

Among possible exercises with this group is that of a debate as to whether the greatest of all wonders is included or not and, if so, which. After proper preparation the pupils may write travel letters from some of the places suggested or travelogue about all of them.

*31, *32 Brooklyn Bridge, New York City.
36 Singer Building, New York City.
37 The Woolworth Building, New York City.
147, *148 Luray Caverns, Va.
*237 Pulpit Terrace in the Yellowstone Park.
240, *241 Old Faithful Geyser, Yellowstone Park.
247, 248 Eroded forms in the Garden of the Gods, Col.
260 The Petrified Forest of Arizona.
*271, *272 Red Mountain blown asunder, Arizona.
*301 Crater Lake, Oregon.
*336 to 340 (3 starred) The great locks in the Gatun Dam, Panama.
345, *346, *347 Volcanic Hawaii.
*542 The Great Forth Bridge, Scotland.

*795 The Granite Temple, Sphinx and Pyramid at Gizeh, Egypt.
804 Abu Simbel Temple in Egypt.
856 The Sun Temple at Baalbek, Syria.
909 Towering images of Buddha in Burma.
*910 Buddhist pagodas in Mandalay, India.
*966 Yasaka pagoda in Japan.
*994, 995 Geysers in Australia.
999 Boro Boedeor, the most remarkable and magnificent of the Buddhists' Temples, Java.

EXPOSITION

These stereographs suggest explanations of processes. The pupils should consider how they can make their accounts clear. Often drawings and additional illustrations will be needed.

12, 13 Codfishing at Gloucester, Mass.
*28 Granite quarrying and making of paving blocks, New England.
*985 and 17 to *24 (5 are starred) Shearing of sheep and making of woolen goods.
*86, *87, *88, *66, *67, 68 Dairying in New York and New Jersey.
*109 to 116 (6 are starred) Mining hard coal.
227 to *234 (6 are starred), *195 to *199 (4 starred), and *203, 209, *119, 120, *121 Mining and manufacturing of steel.
122 to *126 (4 are starred) Manufacturing plate glass in Pennsylvania.
*149, *150, *151 Gathering and distilling turpentine, North Carolina.
*160 and *177 to *180 (3 are starred) Growing and shipping of cotton.

*154 to *158 (4 are starred) Manufacture of cloth from cotton.
*181, *182, 183 Rice in Texas.
224 and *219 to *222 (all are starred) Paper made from wood pulp.
*817, *922 Coffee.
*376, *377, *378 Wheat in Manitoba.
*519 to 523 (4 starred) Porcelain.
*681, 682, *683 Cork industry.
*864 to *871 (6 starred) Silk production in Syria and early processes.
92 to 104 (8 are starred) Manufacture of silk in America.
*435, *210, *211, *89, 90, *91 The manufacture of sugar.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in this list in sizes 16 x 20—20 x 24.

GEOLOGY

EDITED BY

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239 STEREOGRAPHS OR SLIDES WITH 472 REFERENCES TO THEM.

The arrangement of the stereographs and slides for the study of Geology takes into consideration three different aspects of the subject, and is in accordance with the order followed generally in modern text-books on Geology. Therefore, it will be easy for the busy teacher to turn quickly to just the subjects needed. The three groups illustrated are as follows:

I. Dynamical Geology.
II. Structural Geology.
III. Physiographical Geology.

Naturally, in Group I, there are many close parallels to the classification on Physical Geography, and where it is possible to do so reference is made to that classification rather than to make a repetition. It may be found advantageous to refer to the Physiography Classification for supplemental material

even in cases where it is not here suggested. For Group III no special classification has been made, but the teacher is here referred to the above-mentioned classification on Physical Geography.

Publishers' Note:

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations on *Geology* the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

DYNAMICAL GEOLOGY—SUBTERRANEAN

MOVEMENTS OF THE EARTH'S CRUST

DEFORMATION

*700 Folding of the rocks shown on summit of Mt. Pilatus, Switzerland.

OSCILLATION

14 A coast that has undergone subsidence, Cape Ann, Mass.

*29 Overlooking the drowned channel of the Hudson, from lower Manhattan.

82 Coastal plain, New Jersey, resulting from the uplift of an old sea bottom.

*128 Washington, D. C., on the banks of a drowned river, the Potomac.

*166 Pine-grown sand levels of an uplifted sea bottom, Florida.

*394 West coast of Greenland, whose fiord character is due to subsidence.

*513, *514, *518, *562, 563, 565, *570 British coast, whose drowned rivers and tidal inlets are due to subsidence.

*596 Stockholm, Sweden, built on ground that was formerly higher than now.

670, *672 North and west coast of France, a region of past subsidence.

843, 850, 854 Jordan Valley, due to faulting and subsidence.

EARTHQUAKE

*284 Visible results of earthquake shocks in San Francisco, Cal.

285 Results of the San Francisco earthquake, showing faulting.

748, *749 Result of the earthquake at Messina, Sicily.

VULCANISM

In the classification for Physical Geography will be found under the head of "Hot Springs and Geysers" and "Caves and Caverns" nine references to excellent examples of those subjects, and under the head of "Vulcanism" 41 good examples of the following:

Volcanic Cones.
Eruption and Results.
Craters and Fissures.
Lava.
Volcanic Ash.
Lava Floes.
Volcanic Dikes, sills and bosses.

To avoid useless repetition, attention is called to the Physical Geography classification.

DYNAMICAL GEOLOGY—SURFACE AGENTS

DESTRUCTIVE AGENTS

THE ATMOSPHERE

In the Physical Geography classification, under the head "Erosion," will be found sub-heads, "Action of Wind, Frost and Rain," "Conspicuous Action of Frost," "Peculiar Forms Caused by Erosion," "Talus" and "Sand Dunes." The sixty-seven stereographs there listed will meet the present needs.

RUNNING WATER

In the Physical Geography Classification, under the head of "Erosion," will be found sub-headings, "River Erosion" and "Action of Ground Water." The twenty-three stereographs there listed will, it is believed, answer the present need. However, the number of examples may be greatly increased by referring to "Rivers," "Rapids," "Falls," and "Valleys."

SNOW AND ICE

In the Physical Geography Classification, under the head of "Erosion," will be found the sub-head

"Glacial Erosion," and under the head "Plains" will be found the sub-head "Glacial Plains," and under the head "Lakes" will be found the sub-head "Glacial Lakes."

The thirty-six stereographs there listed, together with twenty listed under the head of "Glaciers," will answer the present need.

THE SEA

In the Physical Geography Classification, under the head of "Erosion," will be found the sub-head, "Sea Erosion."

The eighteen stereographs there listed will, it is believed, meet the present need. These may be supplemented by the stereographs listed under the head of "Coast Line and Seashore."

ORGANIC AGENCIES

VEGETATION

*80 Vegetation destructive to the Palisades.
146 Vegetable growths rooting in Natural Bridge, Va.
*305 A wooded slope in Oregon, showing protective effects of vegetation.
373 Tree rooting in a rock in the Thousand Islands.
*699 Unprotected Mt. Pilatus.
708 Lichens corroding the rocks in the Gorge of the Aar, Switzerland.
*944 Roots in the old Chinese wall.

Note.—The part man has played in the destructive forces of the earth is not unimportant. The pumping of oil from the depths of the earth, the mining of coal

and ore, the building of canals, and damming of rivers, are examples of man's effective action.

*127, *915 Pumping oil from the earth.

*109, *110, *111, 113, *195, *203, *204, 227, *228, 230, *231, *232, *249, *265, *266, *267, 268, 474, *833, *912 Mining of coal, iron and other substances.

*803 The great dam at Assuan, Egypt.

333, *334, 335, 337 Digging the Panama Canal.

CONSTRUCTIVE FORCES

RIVER DEPOSITS

190, 382, *548, *549, 550, *579, 580, 619, *792, *876, *885 Examples of river flood deposits.

118 Flood in a valley caused by breaking of dam.

175 Delta of the Mississippi River.

*483 Fan delta in Peru.

*586 Fan delta in Norway.

*716 Fan delta on Lake Geneva, Switzerland.

*724 Fan delta at foot of La Brevent, France.

*876 The Euphrates in Upper Mesopotamia.

LAKE DEPOSITS

551 Lake plain formed by Loch Achray, Scotland.

*600 Lake plain in Sweden.

850 On the shore of the Dead Sea.

854 The Plain of Gennesaret, Palestine.

SWAMP DEPOSITS

*110, *111, 113 Coal deposits.

152 Marsh vegetation.

163 Florida jungle.

*343 Pacific Paradise showing tropical vegetation.

*567 Peat beds in Ireland.

*842 Bog in the oasis of Elim, Sinai.

*357 A rice field in the Philippines. Though artificially flooded, it is suggestive of natural bog.

ICE DEPOSITS

*49 Glacial boulder on striated bed rock, Bronx Park, N. Y.
*384, *705, *710, 714, 718, *721, 722, 759 Glacial moraines.
*721, 723 Erratic rocks on glaciers.
*590 At the foot of Kjendal Glacier in Norway.
*667 Deposits washed from glaciers in the Pyrenees, France.
*318, *391, *396 Icebergs that may carry and deposit material.
*389, *394 Floe ice and the source of the drift it carries.

VARIOUS LAND DEPOSITS

*10, 11, 793, 795, 796, *804 Sand dunes and drifts.
244, *253, 289, *301, *380, *381, 382, 471, *472, *490, 491, 711, 996 Talus slopes.
*237, 240, *241, *994, 995 Geyserite terraces and other deposits.
147, *148, 276 Cave deposits.

MARINE DEPOSITS

*10, 11, 82, *83, *164 Sand beaches.
*287, *514, *665, *672 Gravel beaches.
541 Deposits near Tantallon Castle, Scotland.

II

STRUCTURAL GEOLOGY—ROCKS

IGNEOUS ROCKS

*80 The great diabase rocks of the Palisades, N. J.
81 Huge masses of diabase rock composing Bergen Hill, N. J.
*288, 290, *291 Diorite formations in Yosemite Valley, Cal.
289 El Capitan, huge andesite rock in Yosemite Valley.
*476 Great masses of andesite on western coast of Peru.

*518 Trap rock at Land's End, England.
*562, 563, 564 Great basalt columns of the Giant's Causeway, Ireland.
242, *243 Volcanic agglomerate in Yellowstone Park.
*271, *272 Volcanic ash of Red Mountain, Arizona.
*301 Tuffs in Crater Lake, Oregon.
345, *346 In the crater of Kilauea, H. I.
*347 Lava beds around Mokuaweoweo, H. I.
*731 In the wilderness of lava at the base of Vesuvius.
957 Agglomerate in the crater of Fujiyama, Japan.

SEDIMENTARY ROCKS—(AQUEOUS ROCKS)

MECHANICAL DEPOSITS

Siliceous

82, *164 Sands laid down by the sea.
*223 Conglomerate rock on the Wisconsin River.
*287, *514, *665, *672, 850 Gravel beaches.
367 Perce Rocks, Canada.
*570 Millstone grit cliffs at County Clare, Ireland.
617 Sandy sea bottom uplifted.
804 Carved sandstone at Abu Simbel, Egypt.

Argillaceous

*519 Porcelain clay pit at Bugle, England.

Chemical Precipitates

147, *148 Stalactites and stalagmites in the Luray Caverns, Va.
*237 The beautiful Pulpit Terrace at Yellowstone Park.
240 Geyserite formation, Yellowstone Park.
*241 Sinter deposits around "Old Faithful" in Yellowstone Park.
276 Dendritic stalagmites in a limestone cave, Grand Canyon, Arizona.
995 Accumulations around the geysers of New Zealand.

ORGANIC ACCUMULATIONS

Calcareous

73 Limestone rock at Niagara Falls.
*76 Great gorge of Niagara cut through limestone.
*513 Chalk cliffs at Dover, England.

Carbonaceous

*110 An Anthracite mine in Pennsylvania.
*567 Peat bogs in Ireland.

METAMORPHIC ROCKS

NON-FOLIATED ROCKS

*734, 735 Marble quarry at Carrara, Italy.

FOLIATED ROCKS

Gneiss

14 Reef of Norman's Woe, Massachusetts coast.
*250 In the Royal Gorge, Colo.
*476 Rocks on the coast of Peru.
*576 By the falls of the Rjukanfos, Norway.
583 Near the mouth of the Hardanger Glacier, Norway.
603 The Toppo Falls, Sweden.
636 Lorelei Rocks, Germany.
*699 The southern slopes of Mt. Pilatus, Switzerland.
See numbers *631, *632, 670, 708, *710, 996.

Mineral Veins and Ore Deposits

227, *228 Open-pit iron mining, Hibbing, Minn.
230, *232 In an iron mine at Hibbing, Minn.
*266, *267, 268 In the copper mines in Michigan and Arizona.
*249, *386, *387, 474 Gold and silver mining.
*833 In a diamond mine in Kimberley, South Africa.
*912 Dredging for rubies in Burma.

THE STRUCTURE OF ROCK MASSES

STRATIFIED ROCK

65 Shale strata of Watkins Glen, N. Y.
*76 Limestone strata in the gorge of Niagara.
255 Strata in the canyon at Mesa Verde Park, Colo.
260 In the Petrified Forest, Arizona.
*269 Strata in Canyon Diablo, Arizona.
*274, 277 Angular unconformity in Grand Canyon, Arizona.
*278 Strata in Grand Canyon.
382 Strata in Mt. Stephens, British Columbia.
581 Folded strata in the mountains of Norway.
*631 The great Watzmann Mountain in Germany.
636 The Lorelei Rocks on the Rhine, Germany.
670 Plicated folds of the rock on coast of Finistere, France.
*700 Closed recumbent fold on Mt. Pilatus, Switzerland.
769 Thrusts in the strata of the Corinthian Canal, Greece.
804 Strata clearly marked on the sandstone figures at Abu Simbel Temple, Egypt.
*828 Strata of the rock at Cape of Good Hope.
996 Plicated folds on Mount Elliot, Australia.

JOINTING

14 Irregular jointing in the Reef of Norman's Woe, Mass.
*80 Irregular jointing in the diabase of the Palisades, N. Y.
146 Jointing in the limestone of Natural Bridge, Va.
*223 Jointed rock on Wisconsin River.
*250 Royal Gorge, Colorado.
*261 Joint planes in a rock, Mesa, Arizona.
290 Irregular jointing on Glacier Point, Yosemite.
373 Irregular joints in the granite rock of Thousand Islands.
*476 Irregular jointing of the rocks on Pacific Coast of Peru.
*518 Irregular jointing at Land's End, England.

*633 Irregular jointing in the Danube Valley, Germany.
717 Joint planes on Aiguille Rouge, France.
*821 Zambesi River, East Africa, following the jointing in the basalt rock.

MASSIVE ROCKS

*80 Palisades along Hudson River.
*271 Anticlinal form of volcanic ash in Red Mountain, Arizona.
289, *291 Massive El Capitan and Half Dome, Yosemite Valley.
300 Mt. Shasta, California.
302 Mt. Hood, Oregon.
*311 Mt. Tacoma, Washington.
345, *346, *347 Lava beds in various stages of crystallization, Hawaiian Islands.
*389 Cape Sabine, Arctic.
*562, 563, 564 Giant's Causeway, Ireland.
575 Snowy heights of Mount Gausta, Norway.
*731 Mt. Vesuvius and lava beds.
746 Mt. Etna, Sicily.
*956 Mt. Fuji, Japan.
976, *977 Mt. Aso-San, Japan.

III

PHYSIOGRAPHICAL GEOLOGY

A classification has already been made for the study of Physical Geography which gives access to all the best material on the various topographical features, and while the material is necessarily somewhat differently arranged, and more inclusive than

would be a list made especially to correspond with the subject of Physiographical Geology, the essential elements are all there, and it is believed will be quite as convenient as would such a special classification. Therefore, to avoid any needless repetition, reference is here made to that classification.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

GENERAL HISTORY

EDITED BY

HENRY E. BOURNE, L.H.D.,

PROFESSOR OF HISTORY, WESTERN RESERVE UNIVERSITY, CLEVELAND, OHIO.

290 STEREOGRAPHS OR SLIDES WITH 370 REFERENCES TO THEM.

Stereographs have a very direct and immediate value in teaching history. The pupil's imagination is poor in materials from which to construct ideas of the places and events suggested by the text. For example, no description, however vivid, or flat picture, however good, can supply the aid furnished by the stereograph (486) of the Strait of Magellan in constructing an idea of Magellan's famous voyage. The stereograph (633) of the upper Danube imparts a new interest to the highway through which the Hungarian invaders in the tenth century reached southern Germany, the same route that many later armies took in moving to or from the Austrian basin of the great river. Again, the views (513, 518) of the Channel near Dover and of the ocean near Land's End give the pupil a fresh idea of the natural defences of England.

In order that the stereographs may be most instructive, the pupil should be guided in his study by questions. His powers of attention and observation are not developed enough to lead him to the discovery of all the stereograph can teach. This is true whether the stereographs present mediæval cathedrals or modern industrial methods. For each topic, therefore, the teacher should prepare a series of questions to which answers, either oral or written, should be found.

In the lists which follow, various groupings of stereographs or slides will be noted. The number of these groups could be increased. Others may be arranged by the teacher to illustrate phases of the subject which she desires to emphasize. The lists do not include all the stereographs or slides in the geographical classification, because the lists are intended to suggest a method of use rather than exhaust the possibilities of the method. Stereographs or slides which have no immediate reference to the subject in hand may add to the interest if they give impressions of the present conditions in the particular country being studied. When pupils are studying the earlier history of a region they feel a natural interest in its present appearance, and many questions are suggested as to how the distant past led to the present situation.

It should be noted that the topics for the study

of events, which are arranged roughly in chronological order, are not a complete list of the leading events of the period for which they are listed, but include only those which are immediately illustrated by the stereographs in the geographical classification.

In teaching a history lesson with this material, it has been found helpful to place on the board a few simple observation rules, in order to guide the attention of the pupils to the things of most importance in their study. Such an outline as the following has been successfully used, and is here offered as a suggestion.

OBSERVATION OUTLINE

FOR THE STUDY OF HISTORY

1. Location, or country under observation.
2. Specific object or place seen.
3. Historical importance of object or place seen.
4. Date or period of history pertaining to object or place seen.
5. Particular event of history pertaining to object or place seen.
6. Why the event took place here.
7. Could it have taken place elsewhere and why?
8. Did the visible physical features have any causal relation to the event and how?
9. What results have followed the event?
10. What race of people lived here at the time of the event?
11. What language did they speak?
12. What religion did they hold?

13. Were they civilized, warlike or peaceful?
14. How did they differ from the people who live there now?

(NOTE.—The numbers used below are the serial numbers to be found on the upper right-hand corners of the stereographs. Those numbers preceded by a star (*) are the ones included in the special "600" set. For further illustrative material for *History* on any country, teachers are referred to our complete tours of Egypt, Italy, Greece, and other countries and to our general catalogue.—THE PUBLISHERS.)

ANCIENT HISTORY

List of stereographs given in the 1,000 series available for Ancient History.

*789 to 804 (9 are starred) Egypt.
840, *842 Sinai.
845, 847, 848, 849, *851, 852, 854 Palestine.
*875, *876, 873, 877, 882, 878, 856, *857, *859, *860, *863, 872 Syria.
*761, 762, 763, *764, *765, *767, *768, 770, *771, 772, 773, 774, *776 Greece.
745, *747 Greek Sicily.
*777, 780 Modern Turkey.
709, 725, *726, *728, *729, *730, 732, 735 Roman Italy.
675 Roman Spain.
775 Roman Greece.

ANCIENT HISTORY STUDIED TOPICALLY

TOPOGRAPHY

Egypt, *792, *796; *Sinai*, 840; *Palestine*, 847, 849, 854.
Syria, *863, 872; *Mesopotamia*, *876, 877, *874; *Greece*, 762, *768, 770, *771, 772, 773, 774, *776, 780, *747; *Rome*, 709, 725, *730, *747.

MONUMENTS (BUILDINGS)

Egypt, *789, 790, 791, 793, 794, *795, 800, 802, 804.
Palestine, 847.

Syria, 856.
Babylon, 873.
Greece, 762, 763, *764, 767, *770, 745.
Rome, 725, *728, *729, 732, 675.

Many of these views, of temples especially, illustrate the topic of Réligion.

INDUSTRIES

Egypt, *797, *798, *799, *801; *Palestine,* 848, *851, 845; *Syria,* *860.
Mesopotamia, *875, 878.

MANNER OF LIFE

Egypt, *789; *Palestine and Syria,* 848, 852, *859, *863; *Mesopotamia,* *874; *Greece,* 770, 772; *Rome,* *728, *729, 732, 675.

NOTABLE EVENTS

*789, 790, 793, *795 Building of the Pyramids (2700 B. C.).
840, *842, 847, 848, 849, *863 Story of the wanderings of the Israelites (1200 B. C.).
*747 Legend of Scylla and Charybdis.
770 Citadel of Agamemnon's kingdom (1000 B. C.).
*776 Mount Olympus on whose summit dwelt the gods.
877 Fall of Nineveh (606 B. C.).
873 Fall of Babylon (539 B. C.).
*768 Battlefield of Marathon (490 B. C.).
*761 Athens, burned by Xerxes in 480 B. C.; just before the battle of Salamis.
774 Thermopylæ, where Leonidas and 300 Spartans died defending the pass, just before Athens was captured.
*771, 772 The home of the Spartans and one of their war trails.
762, 763, *764, *765 Remains of Periclean Athens.
745 Greek colony of Syracuse, founded 734 B. C.
778 Constantinople, once founded as the Greek colony of Byzantium (658 B. C.).

725 Story of Horatius.
*728 The reforms of the Gracchi; scenes of their struggle (133-121 B. C.).
*728 Scene also of Cæsar's triumphs (49-44 B. C.).
775 Cæsar's victory over Pompey (48 B. C.).
*730, *731, 732 Destruction of Pompeii (79 A. D.).

MEMORABLE EVENTS AND ACHIEVEMENTS OF MEDIÆVAL AND MODERN TIMES

List of stereographs in *World Visualized for the Classroom* directly available for the study of mediæval and modern history. Other stereographs in the geographical classification should be used to stimulate interest whenever a particular country is touched during the course of a lesson.

American History will be found as a separate classification by Professor Fordyce.

Great Britain, *498, *502, 503, *509, *512, 531, 535, 539, *547.
Ireland, *556.
France, *655, *656, *657, *659, 662, *663.
Spain, *676, *684, *685, *687, 689.
Italy, 725, *726, *728, *729, 733, 737, *738, *740, 748, *849.
Holland, 641.
Germany and Austria, *621, *633, *635, 636, 637, 750, *752, 753, *756, *760.
Russia, *607, *613, 614.
Turkey, 778, 780, *781, 779.
Africa, *785, 802, *805, 806, *807, *815, 826, *828, *829, *832, *835, 838.
Palestine, 847.
Asia, 882.
India, *883, 892, *899, 900, *904, *906.

Philippine Islands, *349.
Japan, 954, 957, 959, *967, *969, *970, *971, *974, *975, 978, *955.
China, 927, *932, 935, *943; *Manchuria*, *946, 953.

MEDIÆVAL AND MODERN HISTORY; TOPICS ARRANGED CHRONOLOGICALLY

FALL OF THE ROMAN EMPIRE

778 Constantinople, once the capital of the Empire, founded by Constantine.

780, *781 Views on the Bosphorus, showing strategic position of Constantinople.

779 Mosque, once Church of St. Sophia, built by the Emperor Justinian.

725, *728, *729 Ruins of Ancient Rome, havoc wrought by the mediæval inhabitants as well as by the barbarian invaders.

*635, 636, 637 Views of the Rhine, once the boundary between the Roman Empire and Barbarian Germany.

MOVEMENTS OF THE PEOPLES

*633 Defile of the upper Danube through which the Hungarians invaded Germany before their defeats by Henry the Fowler and Otto the Great in the 10th Century.

*684 One of the Moslem capitals in Spain, invaded by them first in 711.

882 View in Bagdad, where Haroun-al-Raschid, the great Caliph, ruled.

*656 Distant view of the Island of the Seine (Ile de la Cite), where mediæval Paris was built, and which the Danes besieged for several months in 885.

*498 Norman Conquest of England (1066). The Tower, part of which was built by the Norman, William the Conqueror.

THE CRUSADES

*781 The Bosphorus, crossed by the Crusaders on their march to Palestine in 1096.

847 Jerusalem, captured by the Crusaders in 1099.

*740 Venice, from which the Fourth Crusade started in 1203.

*777 Constantinople, the side on which it was attacked by the Crusaders in 1204.

733 Amalfi, a mediæval town which profited by the trade growing out of the crusading movement.

REMINDERS OF MEDIÆVAL KINGS

*512 Canterbury cathedral, in which Henry II's enemy, Becket, was murdered in 1170.

*547 Stirling Castle, overlooking Bannockburn battleground (1314).

535 Conway Castle built by Edward I in 1284 to defend himself against the Welsh.

*657 Towers of the Conciergerie, remains of an old French royal palace.

662, *663 Rheims cathedral, where many French kings were crowned, including Charles VII, to whom Joan of Arc brought aid in 1429.

ACHIEVEMENTS OF MEDIÆVAL BUILDERS

*512, *529, *569, 662, *663 Durham, Canterbury, Notre Dame of Paris, and Rheims cathedrals.

511 Magdalen College, Oxford.

531, *504 Furness Abbey and Westminster Abbey.

*509, 535 Windsor and Conway Castles.

648 Brussels town hall.

*685 Court of Lions, Alhambra, beautiful specimen of Saracenic architecture.

*899, 900 Taj Mahal, India, completed early in the 17th Century, showing how far Saracenic influence extended and how long it lasted.

MEDIÆVAL ARMOR

753 Imperial armory, Vienna, Austria.

SPANISH AND PORTUGUESE DISCOVERIES AND CONQUESTS

*828 Cape of Good Hope, discovered by Diaz in 1487.

693, 694 Lisbon, capital of Portugal.

*687 Seville, to which Columbus returned after his first voyage, and from which the Spaniards usually set out for the New World.

*486 The Strait of Magellan, discovered by Magellan in 1520.

413, *398, *400, *403 Scenes in Mexico, conquered by Cortes (1519-1521).

*466, 474, *478, 479, 480, 484 Scenes in Peru, conquered by Pizarro in 1531.

162 St. Augustine, founded in 1565.

THREE INCIDENTS IN THE RELIGIOUS STRUGGLES OF THE 16TH CENTURY

*760 Innsbrück, from which Charles V fled in 1552 to escape Maurice of Saxony.

539 Tragedy of Mary Stuart, Holyrood Palace.

689 Cadiz, from which the Invincible Armada sailed against England in 1588.

*513 Dover, near where the Armada was defeated by the English fleet.

INCIDENTS FROM THE COLONIAL HISTORY OF THE 17TH AND 18TH CENTURIES

641 Delftshaven, from which the Pilgrims sailed in 1620.

*883, 892, *906 Scenes in Bombay, Calcutta, and Madras, centers of rule of the British East India Company.

*369, 370, *371 Quebec and Montreal, captured by the English from the French in 1759 and 1760.

*3, *4, *5 Struggles between the colonies and the mother country—Faneuil Hall and the Old South Meeting House.

1, 9 Opening of the Revolutionary War at Concord and Bunker Hill (1775).

106 Independence Hall, Declaration of Independence, July 4, 1776.

*143 Mount Vernon, home of Washington.

PETER THE GREAT

*613, 614 Moscow, the old capital of Russia.

*607 St. Petersburg, the new capital founded by Peter the Great.

THE FRENCH REVOLUTION

*655, *656 Views of Paris, where the Revolution began in 1789.

*657 The Conciergerie where the Revolutionary Tribunal sat during the Reign of Terror.

*659 Notre Dame, where took place the Worship of Reason in November, 1793.

NAPOLEONIC PERIOD

750 Salzburg, capital of an ecclesiastical principality seized by Austria in 1803.

*751, *752 Vienna, captured by Napoleon in 1805, before the battle of Austerlitz.

*633 The upper Danube, a great highway of war in Napoleon's time.

*621 Berlin, occupied by Napoleon in 1806, after the battle of Jena.

693, 694 Lisbon, seized by the French in 1807.

*676 Madrid, seized by Napoleon in 1808.

*613 Moscow, the goal of the fateful campaign of 1812.

*756 The Tyrol, scene of Hofer uprising of 1809.

*556 The old Parliament Building in Ireland, Union of Great Britain and Ireland, 1800.

AFRICA IN THE 19TH CENTURY

*829 Cape Town, seized by the British in 1806.
*805, 806, *807 Algiers, seized by the French in 1830.
*814 Livingstone discovers the source of the Nile (1863).
826 African pigmies.
*785 Suez Canal, opened in 1869.
*786 Cairo, capital of Egypt, occupied by the English in 1882.
*803 Assuan dam completed (1902).
838 Zulu war band (1877).
*830, *832, *835 Scenes from the Boer War (1899-1901).

INDEPENDENCE OF MEXICO AND THE SOUTH AMERICAN REPUBLICS (1816-1824)

*440, 441, 462, 465, 466, 474, *478, 479, 480, 484.
*440, 441 Venezuela.
448, 449, *447, *450 Colombia.
*463, 465 Ecuador.
*466, 474, 477, *478, 479, 480, 484 Peru.
*451, *452, 453 Brazil becomes a republic in 1889.
328 Panama.
400, *403, 410, 413, 415 Mexican scenes.

THE FAR EAST

927 Hong-Kong, seized by the British after the first Opium War.
954 Mississippi Bay, where Perry entered Japan in 1854 to open it to American trade.
954, 957, 959, *967, *969, *970, *974, *975, 978, *955, *971 The New Japan.
927, *932, 935, *943 The New China and the Old.
*938, 940, 941 The Boxer outbreak (1900).
*946 to 953 (3 starred) Scenes from the Russo-Japanese War (1904-1905).
*349 Battle of Manila Bay (1898).

PACIFIC ISLANDS

*1000 A Fiji national dance.

ENGLAND OR GREAT BRITAIN

*495 to 508 (9 starred), 511, 516, 531, 532, 535 England.
*537 to *553 (10 starred) Scotland.
*554, *556 Ireland.
*692 Spain.
693, 694 Portugal.
*785 to 804 (11 starred) Egypt.
*828 to 838 (7 starred) British South Africa.
*883 to *906 (12 starred) India.
909 to 917 (3 starred) Burma.
927 to 930 (2 starred) China.
*982 to *994 (7 starred) Australia and New Zealand.

MEDIÆVAL AND MODERN HISTORY OF GREAT BRITAIN (ARRANGED CHRONOLOGICALLY)

*498 **Tower of London,** built in part by William the Conqueror (1078).
*512 **Canterbury Cathedral;** in the northwest transept, Becket was murdered in 1170.
*529 **Durham Cathedral;** completed about 1140.
*496 **London Bridge.** Near where stood the famous mediæval London Bridge.
535 **Conway Castle,** built in 1284.
*509 **Windsor Castle.** Rebuilt by Edward III, in the 14th Century.
*547 **Stirling Castle.** Stormed by Edward I, in 1304.
550 **Landscape near Stirling Castle.** A mile from Bannockburn battleground (1314).
*540 **Melrose Abbey,** a mediæval Scottish monastery.

*502 **Modern Parliament Buildings.** The mediæval Westminster Hall still stands just behind these buildings at the right. At the left are seen the towers of Westminster Abbey, built in the 13th Century.

532 **Shrewsbury,** near where Henry IV overthrew Hotspur in 1403.

652 **Field of the Cloth of Gold,** where Henry VIII met Francis I, in 1520.

*517 House used by **Drake** and **Raleigh** in the 16th Century.

*525 **Shakespeare's house.**

*526 **Anne Hathaway's cottage.**

539 **Holyrood Palace,** scene of Darnley's murder, 1567.

*883 **Bombay,** which was the dowry Catherine of Braganza brought to Charles II.

*692 **Gibraltar,** captured by the English from Spain in 1704.

*369 **Quebec,** captured from the French in 1759.

*829 **Cape Town,** taken by the English from the Dutch in 1806.

693, 694 **Lisbon,** from which Sir Arthur Wellesley compelled Napoleon's marshal, General Junot, to withdraw in 1808.

927 **Hong-Kong,** taken by the English from the Chinese after the first Opium War in 1842.

901 A palace in **Delhi,** one of the scenes of the Indian Mutiny in 1857.

*785 **Suez Canal,** which passed under British control in 1874.

*786 **Cairo,** capital of Egypt, ruled by England since 1882.

*830 to *835 (5 starred) Scenes from the **Boer War,** 1899-1901.

530 **Wordsworth's cottage** in Grasmere.

*546 **Robert Burns' cottage.**

551, 552, *553 **The Scottish Lakes,** Ben Venue.

THE BRITISH EMPIRE

*495 **The London docks**, center of imperial trade.
*506 **Imperial officials.**
*505 **Coronation Procession.**
*507 **A colonial force in London.**
*513 **The channel**, a defense and a highway to the continent.
*518 **The Ocean**, the road to the Western World.
*692 **Gibraltar**, England's sentinel at the entrance of the Mediterranean.
*785 **Suez Canal**, part of the highway to India.
*829 **Old Halfway station** to India, Cape Town.
*828 **The Stormy Cape**, on the old route to India, discovered by Diaz in 1487.
927 **Hong-Kong**, the British center of trade with China.
*982 **Melbourne**, part of the new England or Greater Britain in Australia.

THE GREAT CITIES OF THE BRITISH EMPIRE

*495 to *507 (9 starred) **London.**
*537, *538 **Edinburgh.**
*556 **Dublin.**
*561 **Belfast.**
*369, 370 **Quebec.**
*371 **Montreal.**
372 **Ottawa.**
*982 **Melbourne.**
988 **Victoria.**
*829 **Cape Town.**
*786 **Cairo.**
*883 **Bombay.**
892 **Calcutta.**
*906 **Madras.**
927 **Hong-Kong.**

INDUSTRIAL LIFE OF THE BRITISH PEOPLE, AND THEIR COLONIES

AGRICULTURE

*548, *549, 550 Scottish country life.
*831 South African veldt.
*798, *799 Primitive agriculture in Egypt.
*885 Vale of Cashmere in India.

INDUSTRY AND TRADE

*496, 497, 500 Busy streets and bridges of London.
*495 Shipping.
*513, *518 The sea.
*785 Suez Canal.
*386 Mining in the Klondike.
*833, 834 Diamond mining at Kimberley.
988 Gold mining at Victoria.
917 Mining in Burma.

AMERICAN HISTORY

NOTE.—The list for American History is not given here, but the subject is fully covered in a separate classification called "Political, Social and Economic History of America," by Prof. Fordyce, to which the teacher is referred.—THE PUBLISHERS.

SCHOOLROOM DECORATIONS

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POLITICAL, SOCIAL AND ECONOMIC HISTORY OF AMERICA

EDITED BY

CHARLES FORDYCE, Ph.D.,

DEAN OF TEACHERS' COLLEGE, UNIVERSITY OF NEBRASKA.

439 STEREOGRAPHS OR SLIDES WITH 736 REFERENCES TO THEM.

The list of stereographs or slides chosen to illustrate the important facts in American history concern themselves with both the geographic and historic data in our history. The object is to emphasize such historic places as are significant in the narrative of the evolution of life in America. The views throw much light on the social and industrial aspects of our development during the past century. The retardation and elimination of students in our public schools are largely due to a lack of interest in the teaching process. Since stereographs give objects in their proper space relation and in all the detail of nature, they have very special value in meeting this need. It is hoped that the stereographs here offered will contribute much toward the vitalization of the subject matter of the ordinary text, adding interest hitherto absent from much of the

teaching of American History. Rightly used, these stereographs become centers around which the historical narrative may be so organized as to add concreteness to the work of the text. As in other lists, the numbers at the left-hand margin refer to the serial numbers in the upper right-hand corner of the stereographs. The slides are designated by the same numbers. The numbers preceded by a star (*) are the ones included in the special 600 series.

PUBLISHERS' NOTE.—For illustrative material on the history of other countries, see the classification for "*General History,*" by Prof. H. E. Bourne. For additional material on the history of either America or other countries, reference should be made to the Publishers' General Catalogue, and to their regular Travel Tours on the different countries.

THE PRE-COLONIAL PERIOD

A VISIT TO THE HOMES OF A PREHISTORIC PEOPLE

The stereographs or slides of this section portray the remains from which we may reason the conditions of life of the prehistoric inhabitants of North America, the forerunners of the Indians found by Columbus.

Describe the Cliff Dwellers, the crude instruments used in their art, their attempts at building villages, etc. In what way do these conditions parallel the early conditions in the progress by all prehistoric races? What advance in social conditions is exhibited by their common system?

*254 Cliff Palace, largest of prehistoric homes in Mesa Verde Park, Colo.
255 A canyon where ancient cave dwellers lived, Mesa Verde Park, Colo.

AMERICAN INDIANS

Describe the Indians. Were their homes, their language, their arts and industries, a fair index of the character of these primitive people? Give the pupils an opportunity to enjoy the views of the Grand Canyon, the village of the Hopi Indians, blanket weaving, etc., and be sure to incorporate facts gained from these views in the story given by the text.

*192 Home life of the Sac and Fox Indians, Oklahoma.
*194 Feathered and mounted braves of the warlike Sioux, Nebraska.
*269 Primitive inhabitants in Canyon Diablo, Arizona.
*261 A village of Hopi Indians, Arizona.
*262 Typical desert home of Navajo Indians, Arizona.
*263 Home duties of Hopi man, Arizona.
*264 Blanket weaving—a Hopi Indian at work, Arizona.
*316 An Indian village in Alaska.
410 Hall of Mosaics—marvelous ruins of the Aztecs at Mitla, Mexico.
*412 Natives of Tehuantepec Isthmus, Mexico.

SIGNIFICANT GLIMPSES OF EUROPE IN COLUMBUS' TIME

These old-world conditions in the time of Columbus were of great significance, for they really con-

tain the foundation causes that led to the great discovery. The extravagant living typified by the "Field of the Cloth of Gold" called for the success of what particular kind of commerce? What side of the life of the fifteenth century is given expression by the splendid cathedrals? What motives were natural to the great thinkers and to the great adventurers of the age? How do the commercial and the religious aspects of the age combine to make it the most romantic period the world has ever known? Were conditions of life parallel in France, Spain and England? How far did the despotism of kings retard the advances in discovery? Where and how was justice administered? What was the strategic point for the European trade? What dangers had arisen for the caravan trade? To what consequence did these conditions lead? Make such use of the stereographs under this heading as may stir in the pupil an interest in these beautiful, historic scenes.

*498 Tower of London.
*547 Stirling Castle, home of the Stuarts, Scotland.
652 The "Field of the Cloth of Gold," France.
*657 The Palace of Justice, Paris.
*659 Notre Dame Cathedral, Paris.
662 Rheims Cathedral, France.
*676 Royal Palace at Madrid.
*684 The Alhambra at Granada, Spain.
*685 The court of the lions in the Alhambra, Spain.
*687 The Guadalquiver River and City of Seville, Spain.

689 Cadiz and harbor, Spain.
*692 The great rock of Gibraltar.
693 Lisbon, the castle of St. George.
703 Bridge over the Aare River built in 1461, Switzerland.
725 Rome from Cosmedin Church to St. Peter's.
*726 Rome from the Dome of St. Peter's.
*736 Florence and the Arno, Italy.
737 The Duomo, Italy.
*738 Milan's Cathedral.
739 The cathedral of Milan—up among its myriad spires—Italy.
*740 Venice, the royal palace, the Campanile and the Doge's Palace.
*742 Palazzo Ca d'Oro, home of an old merchant of Venice.
753 The Imperial Armory, Vienna, Austria.
780 Across the Bosphorus, a commanding sea route to the East, cut off by Mohammedans.
*781 On the European side of the Bosphorus.
*842 Oasis in the desert, on a 15th Century caravan route to the Red Sea and the East.
848 A caravan route to the East very important in the 15th Century.
*938 A typical caravan such as connected Europe with the Far East in the 15th Century.

PERIOD OF THE DISCOVERY AND EXPLORATION OF AMERICA

THE NORSEMEN

The old Viking ship, so indicative of the character of the Norse adventurers, stirs us with admiration for their daring. What is known of their voyages, when were they made, and why is so little sig-

nificance attached to them? The Norse spirit passed on to the great European nations, and we still see it cropping out in their present-day descendants.

574 Old Viking ship—explorer of northern seas and burial boat of a Norse chief, Christiania, Norway.
*589 Some present-day descendants of Norse adventurers.
*591 The spirit of adventure is inborn in the Norse breast—exploring a glacier.

COLUMBUS

The stories of the four voyages of Columbus may be made concrete by the stereographs of the actual scenes where he made history and where to this day is preserved the Spanish tone in manners, customs and system of government. The followers of Columbus succeeded to the fruits of his discoveries with less of peril and more of fame. The pupil will take great delight in the views depicting the scenery in the wild flower-scented country revealed by our famous discoverers.

(CUBA)

*421 The Plaza at Havana.
*422 In the harbor of Havana.
*423 The harbor at Santiago.
424 The coast of Cuba near Santiago.
*427 The hills south from Santiago.

(PORTO RICO)

*320 Columbus Square, City and Bay, from San Christobal fortress, San Juan.

322 The palm trees of Porto Rico.
*323 Amidst the charms of Porto Rico.
324 In a cocoanut forest near Mayaguez, Porto Rico.
*325 Aguadilla—Columbus' first landing-place on the Isle of Porto Rico.

(VENEZUELA)
*440 Overlooking Caracas.
*443 A market-place in Caracas.

(COSTA RICA)
*417 Looking over the largest banana plantation in the world at Zent.
*419 Gathering cacao pods near Port Limon.
*420 Breadfruit trees in grove near Port Limon.

PINZON AND VESPUCCI

*444 Lake Maracaibo, Venezuela.
*451 Harbor at Rio de Janeiro, Brazil.

THE CABOTS

14 The Reef of Norman's Woe, Cape Ann, Mass.
*364 Yarmouth harbor, Nova Scotia.

SPANISH EXPLORATION, CONQUEST AND SETTLEMENT

Before opening the book for a study of these explorations, the teacher should awaken an interest in the places of historic note by a few moments spent with the stereoscope. These views should lie in some easily accessible portion of the schoolroom where students at their convenience may spend an

hour in enjoying them. Such pastime will be found to direct in an educative channel energy that might otherwise be expended in mischief. After the views have been carefully studied, let the student open the pages of his book to find that Spain, when at the zenith of her power, sent her people to claim the land of treasure in the name of her king. How does the quest of Ponce de Leon for the fountain of immortality reflect upon the character of the men of his nation and time? What faults of the Spanish government are indicated by the formidable, yet disastrous, expedition of De Narváez? What defect in Spain's religious policy is so well illustrated by the crusade of Mendez? Where did he build the first stronghold for the king? Through the stereographic pictures of the Panama Canal Zone and neighboring regions, interest in Balboa, Magellan, Pizarro and other Spanish explorers may be revived, and the economic relations of these regions and of the South American states to the United States may be made more clear, and the effect of the Panama Canal upon economic and industrial conditions may be better explained.

PONCE DE LEON, DE NARVAEZ AND MENDEZ

162 The oldest house in the United States, St. Augustine, Florida.

163 "The Palm Tree Nodded to the Mirror in the Jungle," Florida.

*164 The beach at Daytona, Florida.
*165 Pelican Islands, Florida.
*166 White sand levels of Florida.
*167 Cocoanut palms in the white sands of Florida.
*169 At Palm Beach, Florida.

BALBOA, PIZARRO AND OTHERS

327 French Government model of the Panama Canal.
328 The Cathedral, finest structure in Panama.
329 Native life in the interior of Panama.
*330 Palm-shaded buildings of Ancon Hospital, Panama.
*331 Indian dugouts on the River Chagres, Panama.
*332 From old Spanish fort S. E. to Islands guarding Pacific entrance to Canal, Panama.
333 In the great Culebra cut, Panama.
*334 A section of the canal, showing work in progress, Panama.
335 A portion of the finished Canal, Panama.
*461 Traveling up among the Andes, Ecuador.
465 Where Pichincha's Peak rises 15,706 feet on the equator, Ecuador.
*468 At the foot of the Andes, Peru.
471 In the heart of the awesome Andes.
474 Work to-day in a silver mine that enriched the Spanish centuries ago, Cerro de Pasco, Peru.
*475 Squaws carrying water from Lake Paparcocha, Peru.
*476 Where the Pacific waves dash high on the rock-ribbed South American coast at Mollendo, Peru.
477 On road to Arequipa, Peru.
*478 Prosperous and beautiful Arequipa, 800 feet above the sea, E. to Pichapicha Mt., Peru.
479 El Misti from Arequipa, Peru.
480 Coming down from El Misti, Peru.
*483 In a sunny valley among the Andes, Peru.
484 Cuzco, once the richest city in America, from fort of the Inca Kings seized by Pizarro.

MAGELLAN

*486 In the Strait of Magellan.

DE SOTO

*160 A great cotton plantation in Georgia.
*170 Colored students plowing at Tuskegee, Ala.
172 Rapid transit in Mississippi.
*173 The sugar levee beside the Mississippi, New Orleans, La.
*174 On the wharf at New Orleans, La.
175 Along the Mississippi delta near New Orleans, La.
*187 On the Mississippi near St. Louis, Mo.
*188 On the bustling levee at St. Louis, Mo.

CORTEZ, CORONADO AND OTHERS

*257 On the great plains of Arizona.
258 On the oldest ranch in Arizona.
*259 On the great plains of Arizona.
260 A long-buried chapter in the tale of the ages—petrified forest, Arizona.
*261 South to the picturesque village of Hopi Indians, Arizona.
*262 Desert home of Navajo Indians, Arizona.
*265 The hills around Morenci, Arizona.
*266 In the copper hills of Morenci, Arizona.
*267 Copper mines at Metcalf, Arizona.
*269 Primitive inhabitants of Canyon Diablo, Arizona.
*270 A wooded wilderness in Arizona.
*271 Blown asunder by volcanic energies, Red Mountain in N. W. Arizona.
*273 The great Painted Desert, Arizona.
*274 The sinuous Colorado, Grand Canyon, Arizona.
275 Short, steep path on Grand View Trail, Grand Canyon.
277 Prospecting for gold—Indian Gardens, Grand Canyon.
*278 Nature's greatest amphitheatre from Rowe's Point, Grand Canyon.

*279 Redlands and its wealth of orange groves, California.
*280 Orange groves at Riverside, California.
*282 Magnolia Avenue, Riverside, California.

FRENCH EXPLORATION, CONQUEST AND SETTLEMENT

Under what leaders were the first French explorations made? What was the character of the country explored? Why was it less attractive to men of the time than the regions of the Spanish explorations? Why were the French less active than the Spanish in exploration during the greater part of the sixteenth century? What contrast in the aim of the two nations is noticeable? With the views, contrast the picturesque lands explored by the French with the beauty of those explored by the Spanish.

VERRAZANO

*29 New York Harbor from Manhattan.
*30 Lower Manhattan from New York Harbor.
62 Boisterous waves of the Atlantic, Long Island beach.
*83 Life on the ocean wave at Atlantic City.
145 Fleet in Hampton Roads, Va.
*149 In the great pine forests, North Carolina.
*150 Sweating out turpentine in the pine forest of North Carolina.

CARTIER

*366 Perce Bay, Quebec.
367 Famous Perce Rocks, Quebec.
*368 Gannet ledges, St. Lawrence River, Quebec.
*369 The City of Quebec on the St. Lawrence.

370 View up the St. Lawrence from Quebec.
*371 Bird's-eye view of Montreal, Quebec.

JOHN RIBAUT

*153 In Charleston Harbor, South Carolina.
*159 Loading ocean vessels at Savannah, Ga.

CHAMPLAIN AND DE MONTS

*364 Yarmouth Harbor, Nova Scotia.
*365 Village of Grand Pre, Nova Scotia.
*366 Perce Bay, Quebec.
367 Perce Rocks, Perce, Quebec.
*368 On the St. Lawrence near Perce, Quebec.
*369 Quebec founded by Champlain in 1608, the first permanent French settlement in Canada.
370 Frowning citadel of Quebec—view up St. Lawrence River.
*371 Bird's-eye view of Montreal.
373 Amidst the island gems of the St. Lawrence, Thousand Islands.

THE JESUITS

*69 Niagara Falls from the steel bridge.
70 The Falls from "Maid of the Mist," Niagara.
*71 Horseshoe Falls from above Niagara.
*72 American Falls from Goat Island.
74 The Rapids above Niagara Falls.
*76 Whirlpool Rapids from steel bridge, Niagara.
*77 From Canadian side looking S. W. up river toward the Falls, Niagara.
*173 On the sugar levee at New Orleans, La.
*174 On the wharf at New Orleans.
175 Dike along the delta of the Mississippi River, La.
*187 On the Mississippi River at St. Louis, Mo.
*188 On the bustling levee, St. Louis, Mo.
*189 Main Street, St. Louis, Mo.
202 Along the shore of Lake Michigan.

*206 Looking toward Lake Superior, Sault Ste. Marie, Mich.
*223 Looking up beautiful Dalles of Wisconsin River, Wis.
*226 Falls of St. Anthony, Minneapolis, Minn.
372 Ottawa Park and Government grounds, Ottawa, Can.

ENGLISH EXPLORATION, CONQUEST AND SETTLEMENT

Make use of the stereographs as indicated above. Why were England and Spain religious, commercial and political rivals during the reign of Elizabeth? How did the singeing of King Philip's beard lead to the strife for a continent? In what way does Raleigh truly represent the social conditions of his time?

FROBISHER

*389 Arctic explorers preparing for the long winter night—historic Cape Sabine and Baffin Bay.
390 Interior of Fort Magnesia, Cape Sabine, Ellesmere Land.
*391 Cape Sabine and Baffin Bay.
392 Esquimaux homes, Peteravik, Ellesmere Land.
*393 Esquimaux belles and their garb in far North, Cape York, Greenland (76 deg. N.).
*394 The west coast of Greenland.
*395 Esquimaux in summer tents in Greenland.
*396 Whalers in Dexterity Harbor, Baffin Land.
397 Whaling in Baffin Bay.

DRAKE

*286 San Francisco Bay, California.
*287 On the shores of Santa Catalina Island, off the coast of California.

328 In the City of Panama.
329 Native life in the interior, Panama.
*331 Indian dugouts on the Chagres River, Panama.
*332 The Pacific Ocean from old Spanish fort, Panama.
333 In the Culebra Cut, Panama.
335 In the finished Canal before the water was let in, Panama.
*463 The center of the equatorial Andes, looking W. toward the Pacific Ocean, Ecuador.
465 Where Pichincha's Peak rises 15,706 ft. on the equator. Almost on the Pacific coast, Ecuador.
*466 Overlooking Lima on the west coast of Peru.
*468 Cotton plantation at the foot of the Andes on western coast of Peru.
*469 Irrigating plains for sugar cane at Santa Clara, Peru.
*470 Harvesting sugar cane near Lima, Peru.
*476 Where the Pacific waves dash high on the rock-ribbed South American coast, Peru.
477 On road to Arequipa, Peru.
*486 In the Straits of Magellan.

RALEIGH

145 In Hampton Roads—low-lying coast line in the distance.
*149 In a great pine forest, North Carolina.
*150 Sweating out tar from pine wood, North Carolina.
*517 Ancient house in Exeter, England, where Raleigh once lived.

OTHER ENGLISH EXPLORATIONS AND SETTLEMENTS

*10 Amid the sand dunes on Cape Cod, Massachusetts.
11 Cape Cod and its drifting sands, Massachusetts.
14 The Reef of Norman's Woe, Cape Ann, Massachusetts.

DUTCH EXPLORATION AND SETTLEMENT

The views of New York Harbor, East River, the Hudson and neighboring scenery will prove very fascinating to the pupil. Try to decide what conditions there are here in this region that have determined the location of the metropolis of our country. What in the character of the Hollanders would lead them to settle here rather than farther north? Tell the story of the leading Dutch explorers.

*29 Overlooking New York Harbor.
*30 In New York Harbor.
*31 In East River, New York City.
*32 Looking from Manhattan over the East River to Long Island.
*33 On the Hudson near the mouth of the river, New York.
35 Overlooking lower Manhattan and the harbor, New York.
*44 Looking across the Hudson River from Manhattan to New Jersey.
*48 Looking up the Hudson River from the lower end of Riverside Drive, New York City.
*54 The Hudson River N. from West Point, N. Y.
55 The hills along the Hudson, West Point, N. Y.
*57 Looking north up the Hudson—near Poughkeepsie, N. Y.
*61 On the shores of Long Island probably skirted by Hudson.
62 Boisterous waves on the shores of Long Island.
*80 The Palisades along the west bank of the Hudson River.

PERIOD OF COLONIZATION

The periods of discovery and exploration culminated in that of colonization; by use of the excellent views for this period, and by contributions of the class as brought from various texts, the contrast between the social, economic, industrial and political conditions in the various colonies may be shown and traced to their primeval causes.

JAMESTOWN

*160 In the early days of this period negroes were imported as slaves.

*431 The cultivation of tobacco, the new American weed, became the all-important occupation in Jamestown.

COMING OF THE PILGRIMS

*10 Cape Cod and its drifting sands, Massachusetts.

11 Sand dunes of Cape Cod, Massachusetts.

14 On the rocky shores of Cape Ann, Massachusetts.

641 Church at Delftshaven, Holland, where the Pilgrims prayed before embarking for America.

THE QUAKERS

106 In Philadelphia, Pa.

THE DUTCH ABOUT NEW YORK AND ALBANY

*30 Lower Manhattan from the harbor.

35 Lower Manhattan from the Metropolitan Tower, New York City.

*44 Looking across the Hudson to New Jersey from Manhattan.

58 The State Capitol at Albany, N. Y.
*639, *640 In Amsterdam, Holland, home of the Stuyvesants and Van Rensselaers.

LORD CLARENDON AND THE CAROLINAS

*149 In the great pine forest of North Carolina.
*150 Sweating out turpentine in pine woods of North Carolina.
152 Along Government dike at Georgetown, South Carolina.
*153 Charleston Harbor, South Carolina.

OGLETHORPE AND GEORGIA

*159 The wharves at Savannah, Ga.
*160 Cotton plantation in Georgia.

MISSOURI

*188, *189 St. Louis settled in 1764.

FRENCH AND INDIAN WAR

What was the location of the chief Indian tribes? What were their relations with the colonizing nations of Europe, and why was struggle inevitable? What were the strategic points? Examine the views of the St. Lawrence River, and draw conclusions as to why Quebec and other strongholds were selected for fortifications. Why were the French particularly attracted to the St. Lawrence and the adjacent regions?

WESTERN PENNSYLVANIA

*119 Great steel works at Homestead, Pa.
*127 In western Pennsylvania, among the oil wells.

ARCADIA

*364 Yarmouth Harbor at high tide, Nova Scotia.
*365 The village of Grand Pre, Nova Scotia.
*366 Perce Bay, Perce, Quebec.
367 Famous Perce Rocks.

NIAGARA

*69 Niagara Falls from the steel bridge.
*72 Niagara River and American Falls from Goat Island.
74 The Rapids above Niagara Falls.
*76 The Niagara Gorge and Whirlpool Rapids.
*77 Up the Niagara River from the Canadian side.

QUEBEC

*369 The best natural fortifications in the Western world—Quebec.
370 Frowning citadel of Quebec, view up the St. Lawrence from Laval University.
*371 Bird's-eye view of Montreal, Canada.

THE HUDSON

*57 High Bridge at Poughkeepsie, N. Y.
58 Capitol at Albany, N. Y.

THE REVOLUTIONARY WAR

The story of this great struggle with its heroic deeds is of unusually great interest to the student. No series of views will, however, do more to give a charm to the narrative than those of Bunker Hill, Faneuil Hall, the Minute Man at Concord, the home of Washington at Mount Vernon, and others listed under the above headings.

BOSTON AND VICINITY

1 Bunker Hill, Boston.
*2 On the Boston Common.
*3 Washington Street and Old South Church, Boston.
*4 Faneuil Hall, from Quincy Market, Boston.
*5 Interior of Faneuil Hall.
6 Copley Square, Boston.
*7 Longfellow's old home at Cambridge—Headquarters of General Washington.
8 Lowell's old home at Cambridge, Mass.
9 Old battleground, North Bridge and statue of "Minute Man" at Concord, Mass.
12 On the wharf at Gloucester, Mass.
13 The wharf at Gloucester, Mass.
*932 Coolies unloading tea at Hankow, China.

MONTGOMERY'S EXPEDITION INTO CANADA

*369 Quebec from across the St. Lawrence.
370 Frowning citadel of Quebec.
*371 Bird's-eye view of Montreal, Canada.
373 Amidst the islands of the St. Lawrence.

THE SOUTHERN STATES

141 Gen. Lee's old home at Arlington—the estate formerly belonged to Martha Washington.
142 Christ Church at Alexandria, Va., where Washington worshiped.
*143 Home of General Washington at Mt. Vernon, Va.
*153 In Charleston Harbor, South Carolina.
*159 Loading ocean vessels at Savannah, Ga.
*160 Cotton plantation at Georgia.

PENNSYLVANIA, NEW JERSEY AND NEW YORK

*29 Castle Garden and N. Y. Harbor, N. Y. City.
*30 The lower end of Manhattan from harbor.
*31 From Brooklyn Bridge W. to Manhattan.
*32 From World Building, N. Y. City, looking across to Long Island.

*33 Along the docks at lower end of Manhattan, N. Y. City.
36 In lower Broadway, N. Y. City.
*38 Wall Street, past U. S. Sub-Treasury Building, to Trinity Church, N. Y. City.
39 Broad Street, N. past Stock Exchange to the Sub-Treasury Building, where Washington took the oath of office.
*42 Street peddlers' carts on Elizabeth Street. A good residential section of N. Y. City in the Revolutionary days.
*44 Looking across the Hudson to New Jersey from Manhattan, N. Y. City.
*48 Warships and pleasure craft in the Hudson below Riverside Drive, N. Y. City.
53 Along the N. Y., N. H. & H. R. R., near Rye, N. Y.
*54 Up the Hudson from West Point Military Academy, N. Y.
55 Volley fire drill at West Point, N. Y.
*56 Washington's Headquarters at Newburgh, N. Y.
*57 High Bridge across the Hudson River at Poughkeepsie, N. Y.
58 The Capitol at Albany, N. Y.
59 On a truck farm in Long Island.
*61 Life-saving corps on Long Island beach.
*80 The Palisades along the Hudson River.
81 Bergen Hill at Hoboken, N. J.
106 Independence Hall, Philadelphia, Pa.

THE PERIOD FROM 1789 TO 1812

This period, usually known as that of organization, may be found to be one also of expansion. Particular stress should be laid upon the stereographs cited.

LEWIS AND CLARK EXPLORATIONS

235 to 243 (of which 5 are starred) Yellowstone Park.
*246 Pike's Peak, Colo.
302 Mt. Hood and Eliot Glacier, Oregon.
*303 Irrigating a strawberry field in Hood River Valley, Oregon.
*304 Stupendous log raft on Columbia River.
308 Taking salmon in Puget Sound, Wash.
*309 In the great wheat fields of Walla Walla, Wash.
310 In the fruit district of Puyallup, Wash.
*311, *314 Mt. Tacoma, Wash.
*315 Seattle (distance) and harbor from northern docks, Wash.
388 Vancouver, B. C.

IN THE EAST

*38 Looking up Wall Street past the old Federal Building and statue of Washington to Trinity Church, N. Y. City.
39 North on Broad Street to the old Federal Building and statue of Washington, N. Y. City.
*45, 46, *47 Ellis Island, N. Y. Harbor.
*48 Soldiers' and Sailors' Monument, N. Y. City, just across the river from where Hamilton fell in duel.
*57 On a Hudson River boat, for which Fulton's Claremont paved the way.
81 Bergen Hill, N. J., not far from where Hamilton fell.
*128 Down on the Potomac River, past the monument, Washington, D. C.
*129 The White House, Treasury and State House at Washington, D. C., from top of the monument.
*130 From monument east to the Capitol, Washington, D. C.
*131 From Navy Department S. E. past White House to the Capitol, Washington, D. C.
*132 United States Capitol at Washington, D. C.

133 An inauguration of the President, Washington, D. C.
*134 A joint session of the Senate and House of Representatives, Washington, D. C.
135 The Supreme Courtroom in the Capitol, Washington, D. C.
*137 The White House, Washington, D. C.
*138 A President and his official family, Washington, D. C.
139 Some of the officers of the United States Navy.
*215 Scene in Chicago on the site of Fort Dearborn.

THE WAR OF 1812

In the teaching of the location of the chief events of our second war of Independence, the beginnings of our Navy, and the current discussions on the problems of the Navy, the stereoscopic views will do much to add zest and life to the dry statement of the text.

58 The Capitol at Albany.
*69, 70, *71, *72, 73, 74, 75, *76 Scenes at Niagara River and Falls.
*77 On Niagara's banks not far from Queenstown, Canada.
*132 U. S. Capitol at Washington, D. C.
145 Some of our battleships of to-day.
*173, *174, 175 At New Orleans, La.
*195 At the Cleveland docks on Lake Erie.
*198 On the deck of a modern lake steamer.
*206, 207, *208 Over locks and vessels in the canal, Sault Ste. Marie, Mich.
*369 Quebec, from across the St. Lawrence.
370 Up the St. Lawrence from Quebec.
*371 Montreal from Mt. Royal, Quebec.
373 Amidst the island gems of the St. Lawrence River.

THE PERIOD FROM 1815 TO 1848

Study Stereographs 17 to 25 listed below to get an idea of the development of the industrial arts of our country, and the other views listed under this head to gain a clearer conception of the means by which our country expanded.

1 Bunker Hill Monument, Boston.

*15 to *24 (7 are starred) Factories developed in New England.

*25 Manufacturing plants in Massachusetts.

35 Manhattan suffered a terrific fire in 1835. Loss over $20,000,000.

140 Printing United States money at Washington, D. C.

*153 Charleston Harbor, S. C. Troops sent by Jackson in 1832.

162 to *169 (6 are starred) Florida ceded to the United States.

*187 to 190 (3 are starred) Missouri admitted to the Union.

256 Over Salt Lake City, Utah, founded by the Mormons.

THE MEXICAN WAR

In connection with the narrative of this war make a study of the great cathedrals in Mexico City, Chapultepec Castle and other scenes depicted in the stereographs to which your attention is called. Study also the causes of friction about, and the nature of, the resources of the disputed areas.

176, 179, *180, *181, *182, 183 Scenes in Texas.

*257, 258, *259 Sierra Bonita Ranch in southern Arizona.

260 In the petrified forests of Arizona.
*261 Wolpi Village, Arizona.
*262 Typical desert home of Navajo Indians, Arizona.
*265 to 268 (3 are starred) In the copper mining country of southern Arizona.
*398 The great Cathedral in Mexico City.
399 A hat store in Mexico City.
*400 Chapultepec Castle, Mexico City.
401 A typical Mexican at Cuernavaca, Mexico.
402 Overlooking Ameca, Mexico.
*403 West from Puebla, Mexico.
*404 Extracting pulque from the maguey plant, Teotihaucan, Mexico.
405 to *412 (4 are starred) Scenes in Mexico.
413 Guanajuato, Mexico.
*414 Typical Mexicans at work on a farm, Mexico.
415, *416 At Monterey, Mexico.

PERIOD FROM 1848 TO 1861

Supplement the text and conceptions gotten from the stereographs through contributions from pupils who have had the good fortune to visit San Francisco Bay and the sublime views of the Rocky Mountains, gold mines and other points described in the period of development extending through this division of our history.

*2 State House in Boston.
*3 Washington Street in Boston.
*4 Faneuil Hall in Boston.
*5 Interior of Faneuil Hall in Boston.
6 Copley Square, Boston.
135 In the Supreme Courtroom of the United States, Washington, D. C.

*149, *150, *151, *160 The colored slaves in the South were the subject of much agitation and serious trouble.
*186 Lincoln's birthplace at Hodgensville, Ky.
*249 A typical gold mine being worked in Colorado.
*286 Across San Francisco Bay to Oakland, California, the center of interest in the days of the gold fever.
*421 Lopez, leader of the invasion of Cuba, was executed here in Havana.
954 East over Mississippi Bay, Japan, where Perry came in 1854.

THE CIVIL WAR

Make a careful study of the causes of the Civil War. Why did the people of the North see no good in slavery and the people of the South see no harm in it? Study the leading events of the war. Give the political and social results. Make free use of the stereographs or slides in connection with the narrative. Give especial attention to the views intended to elucidate the history of the period from the close of the Civil War up to the time of the Spanish-American War.

EARLY EVENTS

*29 to 41 (7 are starred) Scenes in New York City.
*54, 55 At West Point Military Academy, where the officers of both armies had been educated for the service.
*128 to 140 (8 are starred) Scenes in Washington and down the Potomac River.
141 General Lee's home at Arlington, Va.
142 Christ Church at Alexandria, Va.

*153 Where the Civil War began. Fort Sumter in Charleston Harbor, S. C. Hampton Roads not far from Norfolk.

THE WAR IN MISSOURI AND THE WEST

184 Confederate signal station, Lookout Mountain, Chattanooga, Tenn.

185 Louisville, Ky.

*187, *188, *189 St. Louis and the Mississippi River, Mo.

190 Kansas City, Mo.

THE WAR ON THE COAST

145 In Hampton Roads, where the memorable engagement between the Merrimac and the Monitor occurred.

152 Government dike at Georgetown, S. C.

*153 Charleston Harbor, South Carolina.

*159 On the docks at Savannah, Georgia.

162 At St. Augustine, Florida.

*166 White sand levels of Florida.

*173, *174, 175 Scenes at New Orleans, La.

THE EMANCIPATION PROCLAMATION

*149, 172, 179 The negro in the South.

*186 Birthplace of Lincoln, Hodgensville, Ky.

THE WAR IN PENNSYLVANIA

*107 "The high-water mark" of the Civil War—south to Round Top, Gettysburg.

AT THE CLOSE OF THE WAR

*129 From the monument N. over the White House, State Department and Treasury Buildings, Washington.

*130, 133, *134, *138, 139 In Washington, D. C.

*131 Looking down Pennsylvania Avenue to the Capitol, Washington, D. C.

*132 United States Capitol from N. E., Washington, D. C.

*137 The White House, Washington, D. C.

140 Printing U. S. money in Bureau of Engraving, Washington, D. C.

141 Arlington, Va.

FROM THE CLOSE OF THE CIVIL WAR TO THE SPANISH-AMERICAN WAR

106 The Centennial was held in Philadelphia, 1876.
118 The Johnstown calamity—wreck of the day express, Conemaugh, Pa.
*119, 120, *121 Steel works at Homestead—scene of riot and bloodshed in 1892.
*153 Charleston, S. C., scene of earthquake in 1886.
*192, *194, *261, *262, *263, *264 Indians in the West.
*212 The Chicago that arose from the ashes of 1871.
*212 to *215 Chicago, where the Columbian Exposition was held in 1893.
235 to *243 (5 are starred) Yellowstone Park.
*250 Railroading in the Rocky Mountains, Colo.
*269 The Santa Fe R. R. crossing Canyon Diablo, Arizona.
*315 Seattle (distance) and harbor from Great Northern docks, Washington.
*316 to *319 (3 are starred) Alaska purchased in 1867.
317 Far-north Juneau, Alaska.
*319 On the rim of the "Glory Hole" at the Treadwell Mine.
341 to *347 (5 are starred) Scenes in the Hawaiian Islands.
385 Mouth of the Troandik (plenty fish) River, from which the Klondike takes its name.
*386 Gold miners at work in the Yukon country.
*387 The mine where a single pan of gravel yielded $400 gold, Eldorado Creek, Klondike.
388 Canadian Pacific R. R. at Vancouver, B. C.
*440 to 446 (4 are starred) Scenes in Venezuela.

THE WAR WITH SPAIN

Contrast the governmental ideas of the United States with those of Spain, telling why the Ameri-

cans came to dislike Spanish ways. Make a list of the causes of the Cuban wars against Spanish authority, and trace the causes of the Spanish-American War, its events, the results and the United States colonial policy; using constantly the stereographs under this heading.

*48 Battleships in the Hudson River, where the Viscaya paid us a visit.
55 Volley fire drill at West Point Military Academy, N. Y.
133 The supreme moment, Chief Justice Fuller administering the oath to President McKinley, Washington, D. C.
135 Supreme Courtroom in the Capitol—seat of the Chief Justice, Washington, D. C.
*138 A President and his official family, Washington, D. C.
139 Admiral Dewey and officers of the Navy, Washington, D. C.
144 Parade Ground at Fort Myer, Va.
145 U. S. battleships in Hampton Roads.
*236 Typical army barracks in the West, Fort Yellowstone, Wyoming.
*259 One source from which Roosevelt recruited the Rough Riders.
*286 San Francisco Bay, California.
*293 U. S. cavalryman in the saddle.
*320 At San Juan, Porto Rico.
*349 Manila Bay from within the breakwater, P. I.
350 Transports on the Pasig River, Manila, P. I.
*351 Escolta, the principal business street in Manila, P. I.
*352 The American army in the Philippine camp at Manila.
353 to *363 (7 are starred) Scenes in the Philippine Islands.
*358 Filipino wagons drawn by caraboa, Iloilo, Panay, P. I.
*359 Pina cloth weaver two miles from Iloilo, P. I.

*421 The Plaza and Harbor at Havana, Cuba.
*422 The wrecked "Maine" in Havana, Cuba.
*423 Morro Castle, Santiago, from across harbor entrance; through here passed Hobson and Cervera.
424 From Morro Castle along the coast, where the great naval battle of July 3, 1898, was fought.
*426 Hills south from Santiago, showing encampment of the American army in Cuba.
*437 St. Pierre and its harbor, Martinique.
674 Country people of Spain in Guipuzcoa.
675 and 678 to *692 (10 are starred) Other scenes in Spain.
*676 Guard Mt. in the Plaza de Armas, Royal Palace, Madrid, Spain.
677 Bank of Spain and Calle de Alcala, Madrid, Spain.
927 The Harbor at Hong-Kong, China.

EVENTS AND HISTORY SINCE THE SPANISH-AMERICAN WAR

Describe the Boxer uprising in China, the issues of the campaign of 1900, 1904, 1908, 1912. Tell of the assassination of our three Presidents. Give the relation of the people of the Philippines and Porto Rico with the people of the United States. Relate the story of the building of the Panama Canal. Tell also of the Alaskan boundary dispute, of the peace conference at The Hague, of the rapid expansion of our industries, the recent tendencies in specialization, causes of the increasing high cost of living, etc., etc. The stereographic views listed here will be found of great interest.

BOXER UPRISING IN CHINA

637 German soldiers.
927 Looking across the Bay above Hong-Kong, China.
*928 The 400,000 boat population of Canton, China, on the Chukiang River.
*929 Mission children in Canton, China.
930 From Imperial Bank of Shanghai, China, along the Whangpoo River, over English and American quarters.
*931 Rich native bazaars on Nanking road, Shanghai.
*932 Coolies unloading tea at Hankow, China.
933 Natives in the rice fields of interior China.
*934 Cultivated bamboo at Nanking.
935 Wheelbarrow transportation at Tientsin, China.
936 Junk flotilla on the Pei-ho River, transporting U. S. Army supplies from Tientsin to Peking.
937 West from Ha-ta-men (gate) along huge ancient wall between Tartar and Chinese Peking, scene of desperate fighting.
*938 A caravan on Legation Street, Tientsin, China.
939 From Drum Tower (East) to Tung Chi-men Gate, Peking.
940 South over the Palace of the Forbidden City, Peking, China.
941 Count Von Waldersee escorted by the officers of the allied armies through lines of United States Infantry toward Sacred Gates, Peking.
942 Grand Porcelain Tower of the Summer Palace of the Imperial Family, China.
*943 A bride and groom in Peking, China.
951 Japanese soldiers at Port Arthur.
*952 Japanese soldiers ready for battle.

RECENT EVENTS

*25 Scene of the great strike in Lawrence, Mass.
*48 Hudson-Fulton Celebration.
*109 Scene of great coal strike of 1906.

*134 The McKinley memorial service, Washington, D. C.
*138, *259, *293 Upheaval in Mexico.
*138, 335, *336, 337, *338, 339, *340 Completion of Panama Canal.
145 The Pacific fleet in Hampton Roads, 1907.
*148 U. S. fleet that toured round the world.
176 The Galveston flood.
190 The flood in Kansas City.
256 Salt Lake City; Utah admitted to the Union.
*284 The wreck of the City Hall in San Francisco earthquake.
285 Union Street rent by the great earthquake.
*301 Crater Lake in National Park, reserved in 1885, Oregon.
327 to *340 (7 are starred) The Panama Canal.
*426 Birth of the Cuban Republic at Havana.
953 Working for peace—President Roosevelt and envoys of Mikado and Czar on the "Mayflower."

GROWTH OF LARGE INDUSTRIES

*15, *16 Shoe industry.
17 to *24 (5 are starred) Woolen industry.
*42 In the foreign quarters of New York City.
*43 Development of steel.
53 In the age of electricity.
*78 5,000 horse power developed at Niagara Falls.
85, *127 Oil industry.
*86, *87, *88 Modern dairying, Fairfield, N. J.
92 to 104 (8 are starred) The silk industry in Paterson, N. J.
105 Work in Pennsylvania tube under the Hudson River.
*109 to 116 (6 are starred) The coal industry.
122 to *126 (4 are starred) Glass industry.
*154 to *158 (4 are starred) Cotton industry.
*195 to *199 (4 are starred) and *203, 207, 209, *233, *234 Handling ore.

*210, *211 and *89, 90, *91 The sugar industry.
*213, *214 The meat industry.
227, *228, *231, *232 Mining for iron.
224, *225 Lumbering industry.
*279, *280 The fruit industry.
*303 Irrigation in Oregon.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

HOMES AND LIFE OF THE PEOPLE

EDITED BY

ADA VAN STONE HARRIS

DIRECTOR OF ELEMENTARY TEACHING, PITTSBURGH, FORMERLY ASST. SUPT. OF SCHOOLS, ROCHESTER, N. Y., AND RICHMOND, VA., FORMERLY PRESIDENT OF THE ELEMENTARY DEPARTMENT OF THE N. E. A., ALSO VICE-PRESIDENT OF THE N. E. A.

515 STEREOGRAPHS OR SLIDES WITH 638 REFERENCES TO THEM.

No subject in the curriculum of the elementary school creates greater interest than the study of Homes and Life of the People. The introduction of our children to the home life, habits and customs of those who live in the different sections of Uncle Sam's domains, and also in foreign lands, furnishes an excellent basis for study and comparison of life under varying conditions, and will, it is believed, prove of great value to the teacher in later study of geography and history.

The material should be presented to the children in as graphic and picturesque a form as possible. The most economical medium through which the ideas brought out in the study can be conveyed, is

the picture. But in the stereograph we have something more than a mere picture; we have a literal reproduction of the place or object that brings into focal consciousness the required idea as quickly and easily as if the original were exposed to view. As the children look into these stereographs during the telling of the story of the life of the people, or during the discussion of the topic considered, they find themselves suddenly projected into the actual spot, really living the experiences of these friends of far-away lands.

The thoughts and concepts of the children should be realized in actual things; things made and done, *e. g.*, to see in reality the "Filipino working at the sawmill," or the "Syrian feeding silk-worms their breakfast of mulberry leaves," or "the building of peculiar round boats on the shores of the Tigris," translates word symbols into concrete images. The child is able to reproduce more accurately, to compare and contrast the locality, plant life, animal life, home, food and occupation of others with themselves by contact with these things in this vivid manner.

Each race of people should be studied from the same general plan in the mind of the teacher, which should be amplified to meet the needs of individual groups.

The following outline is given as suggestive, hav-

ing been the means of acquainting many children with the lives and interests of those in remote American centers, also across the seas.

The stereographs or slides given below have been selected with this outline in mind. While every phase of the outline cannot be illustrated as yet by the stereographs—there is a sufficient number from each country to make the country, the home, and the life of the people a reality.

OBSERVATION OUTLINE FOR STUDYING TOPICS

(1) Location, Nationality or Race.
(2) General appearance of type.
(3) Clothing. What. How obtained. Manner of wearing.
(4) Homes.
    1. Environment: Description of the country.
    2. The House: Kind, where and how built, materials used, number and arrangement of rooms, provisions for cleanliness and health.
    3. Furnishings and Utensils: What, how made, how used.
    4. Foods: Kinds used, how procured, how prepared, how served, the relations of food and health.

5. Family Life: Customs and manners, relations of parents and children, duties of each.

(5) Education—what, how obtained, etc.
(6) Social Life—festivals, plays, games, etc.
(7) Industrial Life—various types of occupation.
(8) Religious Life.

Publishers' Note.

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the *Special* "600" set.

For further illustrations on *Homes and Life of the People*, the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

NEW ENGLAND PEOPLE AND HOMES

*7 Stately old home of Longfellow—also of Washington—Cambridge, Mass.
8 Birthplace of James Russell Lowell, Cambridge, Mass.
12 Some of the men who secure food for us, Gloucester, Mass.
14 Typical "Down East Yankee," Cape Ann, Mass.
*15 Skilled workmen in a shoe factory at Lynn, Mass.
*16 At a welting machine in a shoe factory at Lynn, Mass.
17 Experts sorting wool at the mills in Massachusetts.
21 Massachusetts girls at the foster winding machine.
*22 Skilled workmen at the warping machine, woolen mills in Massachusetts.
23 Typical New England skilled factory women in woolen mills.

NEW YORKERS AND THEIR HOMES

39 People of a great city in Broad Street, New York City.
*40 Shoppers in a great metropolis, New York City.
41 Throngs of people and palatial homes on Fifth Avenue, New York City.
*42 People, peddlers' carts and homes of the East Side, New York City.
46 The latest additions to New York's population, Ellis Island.
*47 Examining the eyes of the immigrants at Ellis Island, New York Harbor.
55 They reside at West Point, but they belong to Uncle Sam.
*56 Washington's Headquarters at Newburgh, New York.
*57 New York to Albany on the day boat, Hudson River.
59 Work on a Long Island truck farm, New York.
*60 Curtis in his bi-plane.
*61 Men who risk their lives to save others—life savers on Long Island beach.
*63 People of the sea, Long Island beach.
68 New Yorker and wife at work in a butter factory, New York.
73 Tourists in water-proof garments, emerging from Cave of the Winds, Niagara.
75 Winter pleasures at Niagara Falls, N. Y.
*79 Sleighing in Prospect Park, Niagara Falls.
84 Children of New York suburbanites.

PEOPLE AND THEIR HOMES IN NEW JERSEY AND PENNSYLVANIA

82 Pleasure seekers on the Boardwalk at Atlantic City, N. J.
*83 Life on the ocean wave, Atlantic City, N. J.
85 Workers at the Standard Oil Works, Bayonne, N. J.

*86 Workmen in a sanitary dairy in New Jersey.
92 to 104 (8 are starred) In the silk mills at Paterson, N. J.
*110 to 116 (5 are starred) The men who mine our coal.
122 Clay workers in a glass factory, Pennsylvania.
*123 Workmen in a great glass factory in Pennsylvania.
*127 Workers at the oil wells in western Pennsylvania.

PEOPLE AND HOMES IN THE CAPITOL CITY

*129 Overlooking White House and homes of Washington, D. C.
133 Political life in our Capitol, inauguration of McKinley.
*134 Political life of Washington—Congress in session, Washington, D. C.
*137 The White House, home of the President, Washington, D. C.
*138 The men who execute our laws, Wilson Cabinet, Washington, D. C.
139 Admiral Dewey and fellow officers—Military life at Washington.
140 Type of the people who print our money.

THE SOUTH LAND

141 The old home of General Robert E. Lee, Arlington, Va.
*143 Mount Vernon, old home of Washington.
144 Life with the aeroplane, Fort Myer, Virginia.
*149 Negro life in the great pine forests of North Carolina.
*156 Workers in the cotton mills of South Carolina.
*157 Women in the cotton mills of South Carolina.
*159 Workers on the docks at Savannah, Ga.
*160 Life in the fields of Georgia.
162 Street in St. Augustine, Fla.
*164 Life at Ormond Beach, Florida.
*169 Life at Palm Beach, Florida.

*170 Colored students plowing at Tuskegee, Alabama.
*171 Noted men at Tuskegee Institute, Alabama.
172 Negro life and homes in Mississippi.
*174 Life on the Mississippi wharves.
179 Colored freight handlers in Texas.
*181 Typical Texas farmers harvesting.

CENTRAL WESTERN LIFE

184 Typical veteran of the Civil War.
*186 Typical log cabin home of the early days, birthplace of Lincoln, Kentucky.
*189 Life in the streets of old St. Louis, Mo.
191 Child life on a Missouri ranch.
197 Men who unload the boats—Ohio.
*198 Life on a Great Lake steamer.
202 A Michigan lakeside home.
205 Workers at the copper smelters, Michigan.
*211 In a great beet sugar mill, Michigan.
*212 Life in State Street, Chicago, Ill.
*215 Life on a whaleback boat, Chicago.
*216 A typical Illinois farmer on his plow.
*218 Life on a prairie pasture, feeding the hogs.
224 Poling logs in Minnesota.
*229 Crew of a steam shovel.
230 Miners far down underground, Minnesota.
*232 At work in underground drift, Minnesota.
235 Life on a western coach—six-horse tally-ho, Yellowstone National Park.
*236 Home of the soldiers who guard Yellowstone Park, Wyoming.
*249 Life in a gold mine at Cripple Creek, Colo.
*254 Prehistoric homes—cliff palaces in Mesa Verde Park, Colo.
*257 Life on a cattle ranch.
*259 Cowboys of the plains, Arizona.

*273 Typical life in the sand wastes of Arizona.
277 Typical prospector in Grand Canyon, Arizona.

AMERICAN INDIANS AND THEIR HOMES

*192 Sac and Fox Indians in Oklahoma.
*194 Sioux Indians in Nebraska.
*261 Wolpi, a mesa village of Hopi Indians, Arizona.
*262 At breakfast in a typical desert home of Navajo Indians, Arizona.
*263 Home duties of the Hopi men, Arizona.
*264 Typical Hopi Indian weaving.
*269 Primitive inhabitants of Canyon Diablo, Arizona.

LIFE ON THE PACIFIC COAST

*280 Life in an orange grove of Riverside, California.
*294 Life in a big tree lumbering camp, California.
*304 Life on a long raft, Columbia River, Oregon.
*306 Life of the salmon fishermen, Oregon.
310 Life in a great raspberry field, Oregon.
*311 Life in a mountain camp, Washington.
*312 Life of the mountain guides, Washington.
*316 Alaskan Indians and their homes.

NOTED AMERICANS AND THEIR HOMES

*7 Stately old home of Longfellow at Cambridge, Mass.; also the headquarters of General Washington.
8 Birthplace of James Russell Lowell, Cambridge, Mass.
26 Old home of Daniel Webster, Franklin, N. H.
*56 Washington's headquarters at Newburgh, N. Y.
*60 Curtis in his bi-plane.
*129 Overlooking White House and homes of many famous men, Washington, D. C.
*131 Rear view of White House, Washington, D. C.
133 McKinley's inauguration, Washington, D. C.

*134 Many noted men at the McKinley Memorial Service, Washington, D. C.
135 Supreme Courtroom at the Capitol in Washington, D. C.
*137 Home of the Chief Executive of our country, Washington, D. C.
*138 Wilson's Cabinet, Washington, D. C.
139 Dewey and fellow officers of the Navy, Washington, D. C.
141 Home of General Robert E. Lee.
*143 Home of Washington at Mount Vernon, Virginia.
144 Orville Wright in his bi-plane.
*171 Noted men visiting Booker T. Washington, Tuskegee, Alabama.
*186 Birthplace of Abraham Lincoln, Kentucky.
240 E. M. Elmendorf peering into the crater of Old Faithful, Yellowstone Park.
953 President Roosevelt and envoys of the Mikado and the Czar on the *Mayflower*.

OUR ADOPTED "COUSINS"

*321 Public school in Porto Rico.
322 Life in a pretty suburban home in Porto Rico.
*323 Porto Ricans in a pineapple field.
324 Life in a cocoanut grove.
*325 Typical Porto Rican homes at Aguadilla.
326 A holiday jaunt in a horseless carriage, Porto Rico.
329 Homes and people of Panama.
*331 Life along the Chagres River, Panama.
*342 Life in Honolulu, H. I.
*343 A Pacific Paradise, H. I.
*348 Some of our Pacific Island cousins, Samoa.
350 Life on the Pasig River, Manila, P. I.
*351 Life on the streets of Manila, P. I.
*352 Army life in Manila, P. I.
354 A Filipino school and how it is housed.

*355 Life in the streets of Manila.
*356 A workingman's home and family, Ermita, P. I.
*357 Life in a rice field in the Philippine Islands.
*358 Filipino types in Panay, P. I.
*359 More Filipino types, P. I.
360 Holiday life in Cebu with typical homes and shops.
*361 Filipinos drying hemp.
362 A primitive sawmill and laborers in the Philippine Islands.
*363 Street life and good homes, Cebu.

CANADA AND THE ARCTIC

*366 Country homes around Perce Bay, Quebec.
*371 Overlooking homes of Montreal, Quebec.
373 Gathering water lilies among the Thousand Islands, St. Lawrence River.
*375 Homes in Winnipeg, Canada.
382 Homes in the mountains of British Columbia.
*389 Life in the far North, Baffin Bay.
390 Our Esquimaux friends, Cape Sabine.
*391 Life on the Peary ship *Nina*, in Baffin Bay.
392 Esquimaux homes in Ellesmere Land.
*393 Esquimaux belles and their garb.
*395 Esquimaux and their summer tents, Greenland.
397 Life on a whaler, Baffin Bay.

MEXICO

*398 A Mexican soldier, City of Mexico.
399 Typical Mexicans in a hat market, City of Mexico.
401 Typical Mexican boy.
402 Indian mother and children of Mexico.
*403 Life on a Mexican country road.
406 Factory life in Mexico.
409 Women at the public washing fonts, Jalapa.

*412 Homes and home occupations of the natives of Tehuantepec.
*414 Life in the fields of Mexico.
415 Natives of Monterey.

COSTA RICA

*417 Homes on the largest banana plantation in the world.
418 Natives of Costa Rica on a cacao plantation.
*419 Natives gathering cacao pods.
*420 Life under the breadfruit trees.

CUBA, JAMAICA AND MARTINIQUE

*421 Life on the Plaza in Havana, Cuba.
*426 A gathering of Cuban representatives, Havana.
*428 At tea in a typical Cuban inner courtyard.
*431 Cubans in a tobacco field.
*432 Life in the largest cigar factory of Havana.
*434 Life in a banana field of Jamaica.
*435 Grinding the sugar-cane, Jamaica.
*437 Homes in St. Pierre, Martinique.

SOUTH AMERICA

441 Natives of Venezuela (Caracas).
*442 Everyday life in Venezuela.
*443 Motley life in a Caracas market.
446 Life in a lumber yard in Venezuela.
448 Homes in Santa Marta, Colombia.
449 People and their homes in Barranquilla, Colombia.
*450 Water-carriers and homes of Barranquilla, Colombia.
*451 Wonderful scenic setting of the suburban homes of Rio de Janeiro.
455 In a street of Para, Brazil.
*456 School children in Ecuador.
*458 A native family and its home in Ecuador.

459 Up-country hospitality among the natives—preparing dinner, Riobamba, Ecuador.
*460 In the fields in Ecuador.
*461 Natives in the Andes, Ecuador.
*464 Natives gathering ice near summit of Pichincha, Ecuador.
467 Life in a cotton mill, Lima, Peru.
*468 Chinese laborers in Peru.
*469 When they plant sugar-cane in Peru.
*470 When they harvest sugar-cane in Peru.
*473 Life and homes in a Peruvian village.
474 At the mouth of a silver mine in Peru.
*475 Indian women carrying water, Cerro de Pasco, Peru.
477 On the road to Arequipa, Peru.
*482 Natives and their straw boats on Lake Titicaca, Peru.
491 At R. R. station, Cochenta, Argentine.
*493 On the principal street of Montevideo, Uruguay.

EUROPE

ENGLAND

*496 Throngs on London Bridge.
500 Life in the busy streets of old London City.
*505 Coronation day in London.
*506 Governors of an Empire, Hon. Joseph Chamberlain and colonial officials, London.
*507 Indian soldiers, subjects of the King of England, at Hampton Court, London.
510 An animated scene at the Henley boat races.
*514 Holiday throngs at Southsea.
515 Quaint cottage homes of Shanklin, Isle of Wight.
516 After a hard run with the otter pack, Wiltshire, Eng.
*517 House used by Raleigh and Drake, Exeter.
523 Workmen in the Royal Porcelain Works at Worcester.
*524 The boyhood of England and the beautiful Teme River.

*526 Typical children of "merry England" at Anne Hathaway's cottage.
*527 Among England's thrifty farmers.
528 Plowing in England.
530 Dove Cottage—home of Wordsworth.
532 Quaint old homes in Shrewsbury, England.

WALES

535 School children of Conway.
536 In Fairy Glen, Bettws-y-Coed.

SCOTLAND

539 Holyrood Palace and typical homes of the common people, Edinburgh.
*542 Typical Highlanders in the famous Highland kilt.
*543 Farmers of Thurso.
*546 At the birthplace of Robert Burns, Ayr.
*549 Typical homes of the people as seen from old Stirling Castle.

IRELAND

*555 On a road near Dublin.
558 Hatcheling flax in Belfast.
*561 Everyday life in Belfast.
565 Life on the Island of Achill.
*566 Women harvesting on the Island of Achill.
*567 True sons of old Ireland digging peat, Roscommon.
568 In a home in Ireland.
*569 The picturesque home of a prosperous farmer, County Kerry.
*571 Lord Kenmare's estate, Ireland.

NORWAY, SWEDEN AND DENMARK

*572 Waving good-byes to friends starting for America, Christiania.
*573 Everyday life in Christiania.

575 Quiet homes in the Maan Valley, Norway.
*578 Typical country folk of Norway, Roldal.
*579 Village homes at Odde, Norway.
580 Above the Aabo river, Odde, Norway.
581 A humble mountain home, Norway.
*584 Homes of Bergen, Norway.
588 A farm at the foot of Rustoefjeld.
*589 Typical mountain guides of Norway.
*592 Typical country home in the mountains of Norway.
*593 Lapp home and family near Tromsoe, Norway.
*594 Bride and groom, and typical home scene.
597 Life on the streets of Stockholm.
*598 Royal Palace, Stockholm.
599 In the Royal Palace, Stockholm.
*600 Quaint dress and manners of the country folk of Sweden.
*601 A farmer's family harvesting oats, Sweden.
*602 Happy holiday crowds in the city park, Jonkoping.
606 Danes packing butter, Hasley.

RUSSIA

*608 In front of St. Isaac's Cathedral, St. Petersburg.
*609 Typical Russian women in hay field.
610 Imperial Palace of Peterhof.
611 When Royalty passes in Peterhof Park.
614 Life around the Kremlin, Moscow.
616 Russian cloth market in the "Fair" of Nijni Novgorod.
617 Village of Tartars.
*618 Characteristic country home and family in heart of Russia.
*620 Russian woman working in salt fields, Solinen.

GERMANY

*621 Home of Kaiser Wilhelm, Berlin.
622 Everyday life on the streets of Berlin.

*626 German women working in beet field.
627 German women dressing dolls for European and American market, Sonneburg.
*628 Busy workers in a shoe factory, Germany.
*629 Typical German workmen in a shoe factory.
630 Harvesting barley on a Bavarian farm.
*632 A striking and eccentric home in the Bavarian Alps.
*634 Quiet homes of Heidelberg.
636 Happy children on the Rhine.
*638 Homes of Cologne.

HOLLAND

*639 Over Amsterdam and her homes.
*640 Some of the homes of Amsterdam.
641 Homes of some of the good people of Holland, Delftshaven.
*642 Peasants and their milk-cart on a dyke road.
643 Dignity of Dutch matron, with her dog team, Holland.
*644 Quaint costumes of village girls on wharf at Marken.
*645 Typical Dutch country homes and Dutch milkmaids at Goes.

BELGIUM

*647 Over the homes of Brussels.
648 A market scene in Brussels.
*649 Along the river in Antwerp.
*650 Typical little boy of Belgium.

FRANCE

652 Typical farmers of northern France.
*655 View of the famous Champs Elysées, Paris.
658 Making Gobelin tapestry, Paris.
*661 One of the famous vineyards of France and its workers.
*668 In the salt fields of La Croisic.

*669 Interior of a Breton village home, Crach.
670 Some of the people along the coast of Finisterre.
671 Peasants of Brittany, threshing grain, Carhaix.
*672 French children on the beach of Dieppe.
673 Homes in city of Monaco—principality of Monaco.

SPAIN

674 Women in wheat field, Guipuzcoa.
*676 Soldiers in Madrid.
677 In Old Madrid.
678 The flying ferry of the Nervion River at Portugalete.
*679 How the cow goes round delivering milk in Valencia.
*680 Water seller at Valencia.
*683 Spaniards scraping cork at Almoraima.
*684 Homes of Granada.
*686 Picking dates, Elche.
688 At the bull fight, Seville.
690 At the salt stacks, San Fernando.
*691 Picking and sorting grapes at Malaga.
*692 Life on the shore at Gibraltar.

PORTUGAL

693 The Royal Palace at Lisbon.
696 A Portuguese ox driver at Funchal, Madeira Islands.

SWITZERLAND

697 Laufen Castle, at the Falls of the Rhine.
*698 Quiet little homes on the shores of Lucerne.
702 Youth of Lucerne on the Axenstrasse, Switzerland.
703 Typical city house in Berne.
*704 Everyday life in Berne.
*705 A Swiss matron in her characteristic dress.
706 A country road in Switzerland.
*707 "Youthful years and maiden beauty" in Switzerland.

*710 Swiss mountain guide.
*713 Homes in the charming Zermatt.
715 World-famed monastery at St. Bernard.
*724 Quiet homes in the Chamonix Valley.

ITALY

*726 Over thousands of homes in Rome.
*729 Peasant types among Rome's ruins.
*730 Over homes of Naples.
*731 Little son of Italy near Vesuvius.
732 Beautiful home of the Vetii, buried 79 A. D., Pompeii.
733 Homes at Amalfi.
*734 Another son of Italy in the marble quarries at Carrara.
*736 Homes in Florence.
737 Looking down onto the roofs of Florentine homes.
*740 Gondoliers of Venice and the Doge's Palace.
741 On the canals of Venice.
*742 Home of an old merchant of Venice.
*743 Typical native residents of Palermo, Sicily.
*744 Sons of Italy in a lemon grove in Sicily.
745 Types of modern Syracuse, Sicily.
746 Overlooking the homes of Catania, Sicily.
*747 Sicilian youth at the Messina Straits, Sicily.

AUSTRIA

750 Over the homes of Salzburg.
753 War dress of mediæval days, Vienna.
*756 School children's morning devotion on the road to school.
*758 Typical homes and people of an Austrian hamlet, Val Ampezzo.
759 Humble homes in the Tyrol.
*760 Everyday life in Innsbrück, Tyrol.

GREECE

*761 Over the homes of modern Athens.
*766 Homes of modern Athens.
*768 Type of modern Greek, Marathon.
769 A modern Corinthian.
*771 People and homes of modern Sparta.
774 Characteristic dress of the modern Greek, Thermopylæ.
775 Modern Grecian homes at Pharsala.

TURKEY

*777 Life on the Golden Horn in Constantinople.
778 Over homes of Constantinople.
779 Turks at prayer in St. Sophia Mosque.
*782 Everyday life in Constantinople.
*783 Making Oriental rugs in Constantinople.
784 Artists bringing out the faded designs of Oriental rugs, Constantinople.

AFRICA

EGYPT

787 A street in Cairo.
788 A "ship of the desert" near Cairo.
*789 Types of the native life, on the road to the Pyramids.
790 Arabs at the Pyramid tomb of Khufu, Gizeh.
791 Arabs at Khufu's tomb.
794 Arabs in the passage leading to King Khufu's sepulchre, Gizeh.
*797 Natives raising water from the Nile River.
*798 Irrigation on the Nile.
*799 Farming life on the Nile.
*801 Natives at the first cataract of the Nile.

ALGERIA

*807 Everyday life in Algiers.
808 Typical people and dress of Algiers.

EAST AFRICA

809 Bringing ivory from the jungle, East Africa.
810 Natives at a zebra hunt, East Africa.
*811 Kikuyu women with water vessels, and their homes.
812 Types of the Masai tribe, their strange dress and ornaments.
813 In a Masai kraal, East Africa.
*815 Throne room of the Sultan of Zanzibar.
*816 Wachagga village, East Africa.
*817 Picking coffee in East Africa.
*818 On a jungle trail, East Africa.

BELGIAN CONGO

823 River settlement almost on the Equator, Congo Free State.
*824 On the banks of the Congo, natives and their dugout canoes.
826 Pigmies from the Congo.

BRITISH SOUTH AFRICA

*829 Overlooking homes of Cape Town.
*830 Soldiers of the English Crown in Cape Town.
*833 Native employees at the mouth of the diamond mines.
834 Sorting diamonds at Kimberley.

ZULULAND

838 Zulus of South Africa.

ASIA

TURKEY IN ASIA

839 Overlooking homes of Smyrna, Asia Minor.
840 Arabs in the wilderness of Sinai.
841 In the Oasis of Firan, Sinai.
*842 Nomadic life in Oasis of Elim, Sinai.
*844 Life in the Bazaar of Jaffa, Palestine.
845 Plowing in the Plains of Sharon, Palestine.
846 Everyday life on Christian Street in Jerusalem.
848 A caravan near Jaffa, Palestine.
850 On the shores of the Dead Sea, Palestine.
*851 Typical women of modern Palestine.
852 At Joseph's well in Palestine.
853 Life on the shores of Galilee, at Tiberias.
*858 A home in Damascus, Syria.
*859 A caravan camp at old Damascus, Syria.
*860 Swordmakers of Damascus, Syria.
*861 Bread-making in the court of a Syrian home.
*862 Bedouin women churning milk, Syria.
*863 A Bedouin camp in the mountains, Syria
*864 Feeding the silk worms, Syria.
*866 Types of modern Syrian men, Syria.
867 Syrians near Beyrout, Syria.
868 In a Syrian silk plant.
*869 Workers in a silk-reeling plant in Syria.
*870 Weighing raw silk.
*871 An Arab silk weaver and his loom.
*874 Traditional Garden of Eden in the Euphrates Valley.
*875 Irrigation on the Euphrates River, Mesopotamia.
878 People of the Tigris Valley near Nineveh.
879 Making bricks near Nineveh.
*880, *881, 882 People of Bagdad, on the Tigris.

INDIA

*883 In Bombay.
*884 Children of Amritsar.
*886 Natives of Cashmere.
*887 Humble shawl weavers of Cashmere.
888 Natives of Sutlej and their bullock-skin boats.
889 20-woman team on Darjeeling highway.
890 Bhutanese milkmen at Darjeeling.
893 Water carriers at Calcutta.
894 Typical residents of Calcutta.
*897 Indian type, Calcutta.
898 Homes of Benares.
901 The home of a native prince—palace of the Maharaja of Gwalior.
*903 The Mohammedans of Delhi at worship.
*904 Fabulous wealth of India—Durbar procession at Delhi.
905 Beauty taking the air in Ulwar.

BURMA

907 In a lumber yard at Rangoon.
*908 Freight handlers at Rangoon.
911 Natives of Mandalay.
*912 Natives of Mogok.
914 Natives of Pagan.
916 A floating home and its inhabitants.
917 In the washing plant of the Burma Mining Co., Mogok.

CEYLON

918 Goldsmiths of Ceylon.
919 Moonstone grinders of Ceylon.
*920 Life in a Ceylon rice field.
*921 Natives of interior Ceylon.
*922 Coolies picking coffee in Ceylon.
*924 Natives farming in Ceylon.

CHINA

*928 Some of the boat homes of 400,000 people of Canton, also life on the river.
*929 Mission children, Canton.
*931 Everyday life on Nanking Road, Shanghai.
*932 Coolies unloading tea at Hankow.
933 Natives of inland China.
*934 Natives in bamboo grove, Nanking.
935 China's best and cheapest freighters, Tientsin.
*938 Caravan on Legation street in Tientsin.
939 Over homes in Peking.
940 Palaces of Forbidden City, Peking.
941 The allied armies in Peking.
*943 Bride and groom in costume.

MANCHURIA

*944 On the great wall of China, Manchuria.
*946 At Port Arthur.

JAPAN

951 Jap officers at Port Arthur.
*952 Japanese soldiers on the firing line.
*955 Japanese gathering millet.
*956 Japs near Fujiyama.
957 On Fujiyama.
959 Over homes of Tokyo.
*960 Everyday life in Tokyo.
*961 Under the cherry blossoms, Tokyo.
*962 Home of Count Okuma, Tokyo.
963 A lunch in a Japanese home.
*964 Along the cryptomeria avenue, near Nikko.
965 Japanese lady in a yama-kago, near Nikko.
*967 Under the bamboo trees, showing rickshaws.

968 A potter and his wheel, Kyoto.
*969 Decorating cloisonné, Kyoto.
*970 South over gardens of Mr. Y. Namikawa at Kyoto.
*971 Japanese laborers pulling young rice.
*972 Transplanting rice in Japan.
*973 Girls picking tea in Japan.
*974 Flailing barley in Japan.
*977 The athletic figure of the typical Japanese.
978 Coaling a steamer at Nagasaki.

KOREA

979 Among the queer Koreans outside Seoul.
*980 Building a Korean home, Seoul.
*981 Good types of the people of the Hermit Kingdom.

AUSTRALIA

*983 Everyday life in Melbourne.
*985 Shearing sheep in Australia.
986 In a great wool salesroom in Australia.
*990 Sons of Australia's aboriginal huntsmen and warriors with their boomerangs.
993 Girls of the old Maori race as they are to-day, Auckland, New Zealand.
*994 At Rotorua Lake, New Zealand.

JAVA

*997 Typical children and "grown-ups" of western Java.
998 Children at Buitenzorg, Java.

FIJI ISLANDS

*1000 Feast day in the Fiji Islands—native dance.

HOMES OF NOTED MEN AND WOMEN OF OTHER COUNTRIES

*400 Chapultepec—home of Diaz, Mexico City.
*498 Tower of London, famous old palace and prison of royalty.
*517 House used by Raleigh and Drake at Exeter, England.
*525 The living room in home of Shakespeare, Stratford, England.
*526 Anne Hathaway's cottage at Shottery, England.
530 Dove Cottage, home of William Wordsworth, Grasmere, England.
539 Holyrood Palace, old home of Mary, Queen of Scots, Edinburgh.
541 Home of Earl Douglas, N. Berwick, Scotland.
*546 Birthplace of Robert Burns, Ayr, Scotland.
*547 Stirling Castle, Scotland.
*573 Home of the King of Norway, Christiania.
*598 Royal Palace, Stockholm, Sweden.
599 In the home of the King of Sweden.
610 One of the homes of the Czar of Russia.
611 In the Imperial grounds of Peterhof Palace, Russia.
*621 Home of Emperor William of Germany, Berlin.
*632 One of the homes of King Ludwig, Bavarian Alps, Germany.
*635 Ehrenfels Castle on Rhine, Germany.
660 In the home of Louis XIII.
673 Home of the Prince of Monaco.
*676 Home of the King of Spain.
*684 The Alhambra, Granada, Spain.
*685 In the Court of the Lions, Alhambra, Granada, Spain.
*726 Distant view of the home of the King of Italy.
727 In the palace of the Pope, Rome, Italy.
*740 Royal and Doge's palaces, Venice, Italy.
741 The Doges' palaces, Venice, Italy.
*761 Royal palace, home of the King of Greece, Athens.

*815 Throne.room of the Sultan of Zanzibar.
901 In palace of H. H. the Maharaja of Gwalior, India.
942 In the home of China's ruler, Peking.
*962 Home of Count Okuma, Tokyo, Japan.
*970 Home and gardens of Mr. Y. Namikawa, Kyoto, Japan.

HOMES OF RULERS OF MANY LANDS

*129 Overlooking the home of the chief officers of the United States, Washington, D. C.
*131 Rear view of the White House, Washington, D. C.
*137 The White House, home of the President of the United States.
*400 Chapultepec Castle, residence of President Madero, Mexico.
*498 Tower of London, famous old palace and prison of royalty.
539 Old home of Mary, Queen of Scots, Edinburgh.
541 Old home of Earl Douglas, N. Berwick, Scotland.
*547 Stirling Castle, Scotland.
*573 Royal Palace, Christiania, Norway.
*598 Royal Palace, Stockholm, Sweden.
599 In the Royal Palace, Stockholm.
610 Imperial Palace of Peterhof, Russia.
611 In the Imperial grounds of Peterhof Palace, Russia.
612 The Imperial yacht *Alexandria*, Russia.
*621 Home of the Emperor of Germany, Berlin.
*632 Home of King Ludwig, Bavarian Alps, Germany.
*635 Ehrenfels Castle on the Rhine.
660 In Versailles, palace of French rulers.
673 Home of the Prince of Monaco.
*676 Royal Palace, Madrid, Spain.
*684 The Alhambra, Granada, Spain.
*685 Court of the Lions in the Alhambra, Granada, Spain.
693 Castle of St. George, Lisbon, Portugal.
*726 The Quirinal Palace, Rome (distant view).

*740 The old Royal Palace of Venice, Italy.
*761 Royal Palace of Greece, Athens.
*765 Home of the King of Greece, Athens.
*815 Throne room of Sultan of Zanzibar.
901 Great Durbar Hall in palace of H. H. the Maharaja of Gwalior, India.
940 Palaces of the Forbidden City, Peking, China.
941 Sacred Gate to Forbidden City.
942 Grand Porcelain Tower of the Imperial Summer Palace, Peking, China.

PRIMITIVE HOMES

*186 The Lincoln log cabin, Kentucky.
*254 Cliff palaces, homes of a prehistoric race, Colorado.
*261 Homes of the Hopi Indians.
*262 Indian tepee—home of the Navajos.
*325 Porto Rican houses.
329 Native homes in Panama.
*356 A workingman's home in Ermita, P. I.
*412 A home in Tehuantepec, Mexico.
565 Primitive homes in the Island of Achill, Ireland.
*593 Primitive home of Lapp family, Norway.
617 Village of Tartars, Russia.
*816 Primitive homes in East Africa.
*886 Home life of contented citizens of Cashmere, India.
916 Floating home of natives of Burma.
*928 400,000 boat population of Canton, China.

COUNTRY HOMES

26 A typical home of Old New England, Franklin, N. H.
*56 A country home on the Hudson, New York.
141 A fine old country estate, Arlington, Va.
*143 Another fine old country estate, Virginia.
172 Country homes of the colored people of the South.
*526 Anne Hathaway's cottage at Shottery, England.

530 Wordsworth's cottage, Grasmere, England.
*546 Birthplace of Robert Burns, Scotland.
*549 Homes in feudal Scotland—relics of the past.
550 Pretty Scotch country homes.
565 Primitive homes on the Island of Achill, Ireland.
*569 Picturesque home of a prosperous farmer, County Kerry, Ireland.
575 Quiet homes in the Maan Valley, Norway.
581 A humble mountain home, Norway.
*502 Country home in mountains of Norway.
*618 Characteristic country home in the heart of Russia.
*642 Typical country homes in Holland.
*645 Country homes at Goes, Holland.
674 A country home in Spain.
706 Typical country homes in Switzerland.
*724 Typical Swiss country homes in the Chamonix Valley.
*758 Typical and attractive country homes in Austria.

CITY HOMES

41 City homes of the wealthy on Fifth Avenue, New York City.
*42 People of the lower East Side and where they live, Elizabeth Street, New York City.
*129 Overlooking the home of the President and many of the finer homes of Washington, D. C.
*131 Rear view of the White House at Washington, D. C.
*442 City homes in Venezuela.
449 Residence of wealthy citizen of Barranquilla, Colombia.
*489 In Buenos Ayres, Argentine.
*493 City homes in Montevideo, Uruguay.
*517 Elizabethan house, Exeter, England.
532 Quaint old houses of Shrewsbury, Eng.
*638 City homes, Cologne, Germany.
*639 City homes, Amsterdam, Holland.

*640 Up the tree-lined canal, Amsterdam, Holland.
*647 City homes in Brussels, Belgium.
*655 Typical mansions along the Champs Elysées, Paris.
677 City homes in Madrid, Spain.
703 City homes in Berne, Switzerland.
*730 City homes in Naples, Italy.
737 Homes in the city of Florence, Italy.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

HOME ECONOMICS

BY

ISABEL BEVIER, Ph.M.,

PROFESSOR OF HOUSEHOLD SCIENCE AND DIRECTOR OF COURSES, UNIVERSITY OF ILLINOIS.

302 STEREOGRAPHS OR SLIDES WITH 323 REFERENCES TO THEM.

The stereographs and slides classified below have a particular bearing on the subjects taught under the head of Home Economics. The teacher is referred to the classifications on "Products and Industries" and "Agriculture" for fuller treatment of those subjects.

The syllabus of Home Economics gives the following definition of that important term: "Home Economics, as a distinctive subject of instruction, is the study of the economic, sanitary, and esthetic aspects of food, clothing, and shelter as connected with their selection, preparation, and use by the family in the home or by other groups of people." If one considers this definition carefully, one is helped to an appreciation of the breadth of the field included in home economics. It touches the life of the individual and of the nation at so many vital points. Food, shelter, clothing, the home, are words

full of significance. They imply the demand that the world and its products shall be available for their use.

STUDY OUTLINE

HOUSEHOLD SCIENCE	HOUSEHOLD ARTS
Agriculture.	Houses and Home Life.
Transportation.	Clothing.
Markets.	Cotton.
Food supplies.	Wool.
Bread.	Flax and hemp.
Rice.	Silk.
Milk and butter.	Costumes.
Beef and pork.	Fuels.
Fish.	Industries — preparing material for the home.
Fruit.	
Coffee, tea, chocolate.	
Sugar.	
Salt.	
Water.	

Publishers' Note

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and also on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations for Home Economics the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

HOUSEHOLD SCIENCE

AGRICULTURE

Perhaps it is well to begin the story with the ancient and honorable art of agriculture which is now securing so much attention that it seems to be a new science as well as an old art. For more detailed treatment see the classification on *"Agriculture."*

The stereographs illustrate both primitive and modern agriculture with a variety of food products.

*170 Colored students plowing at Tuskegee Institute, Tuskegee, Alabama.
*193 In the great corn fields of eastern Kansas.
*200 Twentieth Century harvesting machine cutting and binding corn in a Michigan farmer's field.
*216 Plowing on a prairie farm in Illinois.
*414 Farming with poorly paid native help—Mexico.
*460 Ice-crested Chimborazo towering 20,498 feet toward the sun, north from road to Quito, Ecuador.
528 Plowing by motor power in England.
*548 Where the Forth "in turnings intricate through these rich fields doth run"—Stirling, Scotland.
550 From Stirling Castle west up the beautiful Forth Valley toward the Trossachs, Scotland.
*566 Harvesting on the Island of Achill, N. W., to Sleivemore, northwestern Ireland.
*569 The picturesque home of a prosperous farmer—County Kerry, Ireland.
*578 A farmer's family making hay in a sunny field between the mountains, Roldal, Norway.
*601 A farmer's family harvesting oats in a sunny field at Lerdal, Sweden.

630 Growing hops and harvesting barley on a Bavarian farm, near Bamberg, Germany.
845 Plowing in the fertile plains of Sharon, Palestine.
*924 Native farming in tropical Ceylon—plowing a paddy field.
*955 Cutting millet on a Japanese farm.
*971 Pulling young rice shoots for transplanting, Japan.
*972 Native women transplanting rice—spring work on a Japanese farm.
*974 Flailing barley beside the Inland Sea (S. E. to Oshima Island), Japan.
*987 One of the most fertile valleys on the continent—S. E. from Tower Hill over Koroit, Australia.
*992 Acres of hop vines on a prosperous farm at New Norfolk, Tasmania.

TRANSPORTATION

In these days when the press is full of words both foolish and wise concerning the cost of living, no thoughtful person escapes at least some ideas of the factors that enter into this cost, and even a cursory glance shows how important an element the subject of transportation of food is.

It is a far cry from the old days, when food was eaten where it was produced, to the present; even the small city market displays food products that have been brought from many lands. The consumer must realize that he pays for this cost of transportation in the increased price for food which has been brought any distance. For a more complete and detailed list, see the classification on "Transportation."

81 Great escalator carrying wagon-loads of freight on Bergen Hill, New Jersey.

*174 Busy ship-crowded wharves on the Mississippi, New Orleans, La.

*188 On the bustling levee, St. Louis, where the products of the Mississippi Valley are distributed.

207 Whaleback freighters of ore and grain in canal, Sault Ste. Marie, Mich.

*215 Loading a great whaleback ship at the famous grain elevators of Chicago, Ill.

350 Steamships and local river craft on the lower Pasig, Manila, P. I.

*358 Filipino wagons drawn by caraboa, Iloilo, Panay, Philippines.

388 Where train and steamship meet—Canadian Pacific Station, Vancouver, B. C., Canada.

445 Loading steamer for United States ports, Maracaibo, Venezuela.

*473 Pack train of llamas, unique Andean beasts of burden with Indian driver, Cerro de Pasco, Peru.

*487 Most costly docks in the Western Hemisphere, Buenos Ayres, South America.

*495 Ocean liners at Albert docks on the Thames, below the world's greatest city, London.

*560 Building an ocean liner, Harland & Wolff's Works—Belfast, Ireland.

*604 Busy harbor of Copenhagen, a famous port of old times, where great ships now come and go, Denmark.

*687 Shipping on the Guadalquiver, S. E. from Bridge of Isabel II to Golden Tower, Seville, Spain.

*785 Splendid view of Suez Canal, showing ships passing each other.

*789 The road to the Pyramids—westward toward Gizeh from near Cairo, Egypt.

*863 A Bedouin camp in the mountains of the Abarim highlands.

914 Hauling timber with buffaloes and bullocks from Irrawaddy river near Pagan, Burma.

935 Wheelbarrow transportation—China's best and cheapest freighters—at the boat landing, Tientsin.

*938 One of the typical "freight trains" of China—east on Legation Street—caravan from Tientsin, Peking, China.

945 Clumsy Chinese junk under full sail on the Yellow Sea.

*960 Burden-bearers of Japan—a street scene in Tokyo.

978 Coaling the Pacific Mail S. S. "Siberia" at fortified Nagasaki, Japan.

979 A pack-train in the suburbs outside Seoul, Korea.

MARKETS

The past five years have witnessed a great change in the sanitary conditions of the markets all over the country. The women have done valuable work in this form of betterment of living conditions. A growing civic pride and a realization of the danger and disease in dirt, as well as an appreciation of the real economic value of attractive service, have greatly improved the appearance of the market and the delivery wagons.

*42 Street peddlers' carts on Elizabeth Street—looking north from Hester Street, New York City.

*443 Typical view of the people of Caracas in the market-place, Venezuela.

648 West across market to the town hall, Brussels, Belgium.

*782 "Step" street climbing up from the Bosphorus, and middle class people of Constantinople.

787 A crowded street in Cairo, Egypt.

808 Typical Moorish shop with proprietor and patrons, Algiers, North Africa.

*844 The bazaar of Jaffa on a market day, Palestine.
846 Christian Street—motley life in the Holy City's bazaar district, Jerusalem.
*931 Rich native bazaars on Nanking Road—principal street of Shanghai, China.

FOODSTUFFS

WHEAT AND BREAD

The countless billions invested in the food supply of the world, the vital need of every human being for food, gives that subject universal and perennial interest. The staff of life varies in appearance and composition, but it exists in some form for every human being.

*309 Modern American harvesting in the Great Western Fields, Walla Walla, Wash.
*442 The bread mule on a typical street in Caracas, Venezuela.
671 Autumn in Brittany—peasants threshing grain on a farm near Carhaix, France.
674 Harvesting wheat, in the Basque Province of Guipuzcoa, Northern Spain.
*799 "Thou shalt not muzzle the ox when he treadeth out the corn" (threshing), Egypt.
*851 Women grinding at the mill—Palestine (St. Matt. XXIV: 41).
*861 Bread-making in the court of a Syrian home, Palestine.

MILLET

*955 Peasants cutting millet near Yokohama.

RICE

Since this serves as practically the only food for so large a part of the human race, almost anything

about it is of general interest. A disease common to rice-eaters has been the subject of much study. While the cause of beri-beri is not fully understood, it does seem to be settled that it is due to the lack of a substance found in the covering of the grain. Hence the use of unpolished rice is to be preferred to polished.

*181 Cutting rice in Texas.
*182 Hauling rice to the thresher—showing canal from which growing crop is flooded.
183 Steam thresher at work in a rice field—preparing crop for the mill, Texas.
329 Natives shelling rice in Panama.
*357 Typical Filipino farming scene. A rice field and water buffalo—resting between furrows—Luzon, P. I.
*886 Shelling rice and gossiping with the neighbors—home life of contented citizens of Cashmere.
*908 Freight handlers and the thousands of tons of rice which they have unloaded, Rangoon, Burma.
*920 Country home with paddy field and natives harvesting rice, Ceylon.
933 Paddy fields and group of jeering natives at Matin, 700 miles inland, Kiangsi Province, China.
*971 Pulling up young rice ready for transplanting in Japan.
*972 Patient laborers transplanting rice shoots on a farm in beautiful interior of Japan.
*975 Looking W. toward Kumamoto across rice fields in old crater of Aso-San, Japan.

MILK AND BUTTER

Perhaps no single article of diet has received so much study as milk. It is described as a natural

food, a complete food. Some one has said, in its veil of whiteness lies its danger, for we know now that with all its life-giving properties it is at the same time often the bearer of most dangerous diseases, just because it is so good a medium for disease germs. A growing appreciation of the value of human life and the appeal made by the helplessness of childhood has raised a hand to stay the slaughter of the innocent and defenceless child by the establishment of sanitary milk depots in congested districts. Certified milk has brought a new definition for cleanliness into all the processes connected with the production and distribution of milk.

*66 Milk in the separating room.
*67 Churning for butter.
68 Making up butter in pound packages at a model dairy.
*86 White-robed milkmen milking in a model stable, Fairfield Dairy, New Jersey.
*87 Milk bottles in great steam sterilizer, Fairfield Dairy, New Jersey.
*88 Filling and stoppering twelve milk bottles at once, Fairfield Dairy, N. J.
*582 Herd of reindeer, hardy creatures of the northern wilds, and snowy heights of Hardanger glacier, Norway.
606 Packing prize butter for the European markets in the biggest dairy in the world, Hasley, Denmark.
*642 Industrious peasants and milk-cart passing a wind-mill on a dyke road west of Dordrecht, Holland.
643 Substantial dignity of a Dutch matron with her dog-team—outskirts of Enkhuysen, Holland.

*645 Picturesque and thrifty countrywomen with milk pails balanced on wooden yokes—Goes (Zeeland), Holland.
*646 Miles on miles of peaceful pastures where windmills beckon to each other (N. of Amsterdam), Holland.
664 Battlefield of Sedan (N. E.), where 11,000 French fell before surrender, France.
*679 How the cow goes around delivering milk to housekeepers in Valencia, Spain.
*743 Goats milked while you wait—in a crowded marketplace in old Palermo, Sicily.
*862 Bedouin women churning milk, typical interior of a big tent, Syria.
890 Bhutanese milkman with curious bamboo jars, at the public water fountain, Darjeeling, India.
*895 How Hindu cows enjoy life in Calcutta—sidewalk scene on Harrison St., looking West, India.

BEEF AND PORK

Meat of some sort has long been one of the most important articles of food. It is estimated that about 40 per cent. of the money expended for food is spent for meat, which furnishes about 16 per cent. of the total nutrients of the diet. Available statistics show that the inhabitants of the United States consume more meat than any other nation, using on an average about 120 pounds of meat per year per capita, with an average expenditure of about ten cents per man per day for this food. A bulletin of the United States Bureau of Labor, among other most interesting statistics as to the changes in the prices of fifteen food products since 1890, shows that sirloin steak in April, 1913, cost 72.7 per cent.,

round steak 90.1 per cent., pork chops 118 per cent., and bacon 122.9 per cent. more than the average price, respectively, of these articles for the periods 1890-1899.

*213 Cattle in the great Union Stock Yards, the greatest of live-stock markets, Chicago, Illinois.
*214 A half-mile of pork in Armour's great packing house, Chicago, Ill.
217 How grass and sunshine are turned into beef—steers grazing in green pastures, Illinois.
*218 Genuine corn-fed pork. Feeding hogs in a prairie pasture, Illinois.
*257 Among the 30,000 cattle at Sierra Bonita ranch—roping a yearling, Arizona.
258 Moving a herd, Sierra Bonita, the oldest ranch in Arizona, where 30,000 cattle range.
*259 Examining the brand of a yearling on a ranch in Arizona.
544 Highland cattle in pasture at Thurso, Scotland.
*585 Gudvangen's outlook over the Naerofjord, where the sea reaches far in among the mountains, Norway.
757 The Drei Zinnen from Lago Misurina, Tyrol, Austria.
813 Sunrise exodus of the cattle from a Masai kraal at base of Mt. Kenia, East Africa.

FISH

Much of pleasure and recreation is associated with this important and economical source of food material. It is a far cry from the days of Isaak Walton to the present great industries represented by cod fisheries in the Atlantic, of the salmon industry on the Pacific coast.

12 Fish "Captains Courageous" bring home; cleaning codfish on a Cape Ann wharf, Gloucester, Mass.

13 "Fish out of water"; drying cod from Grand Banks on racks at a Cape Ann wharf, Gloucester, Mass.

*306 Seining Chenook salmon, largest variety known, Columbia river, Oregon.

*307 Chenook salmon on the floor of a great cannery, Astoria, Columbia River, Ore.

308 Brailing—taking salmon from the trap for the great canneries, Puget Sound, Washington.

545 Scotch herring, the best in the world—thousands of kegs ready to ship—Wick, Scotland.

853 Life on the shore of Galilee, at Tiberias, Palestine.

FRUIT

Hutchinson says, from a nutritive point of view, fruits may be divided into two groups, the flavor fruits and the food fruits. In the former he includes all fruits which contain more than 80 per cent. water; in the latter, all fruits which have more than 20 per cent. solids. The banana is an example of the latter class. Fruit brings water, acids, mineral salts and sugar into the diet in most appetizing forms. In its native state it occurs in many beautiful forms. The orange groves of California and the vineyards of Italy are far-famed.

*167 Cocoanut trees in the white sands of Palm Beach, Florida.

*168 Blossom of the cocoanut palm. Fruit in all stages.

*279 Redlands and its wealth of orange groves from Smiley Heights, Cal.

*280 Picking oranges in one of the famous groves at Riverside, Cal.

*281 Flowers and fruit and winter sunshine on an orange tree, in a forty-acre grove, near Pasadena, Cal.

310 In the great fruit district—picking red raspberries, Puyallup, Wash.

*323 Amidst the charms of Porto Rico—delicious pineapple in the fields of Mayaguez.

324 Husking crop in a cocoanut forest, near Mayaguez, Porto Rico.

*331 Indian "dugouts" on the Chagres River, bringing bananas, the chief export of Panama, to Gatun.

*343 Ferns and cocoanut palms of a Pacific paradise, Waikiki, Hawaiian Is.

*344 In the heart of a banana plantation, Hawaiian Is.

401 Gathering the luscious fruit of a heavily laden mango tree—Cuernavaca, Mexico.

*417 Looking (W.) over largest banana field in the world—United Fruit Co.'s Plantation, Zent, Costa Rica.

*420 Breadfruit tree in a grove near Port Limon, Costa Rica.

433 Citron tree, Jamaica, West Indies.

*434 Gathering bananas at the famous Cedar Grove Plantation, Jamaica.

*661 Vineyards covering sunny fields at Ay near Epernay (champagne district), France.

*686 Picking great bunches of dates from luxuriant date palms, Elche, Spain.

*691 Under a canopy of grapes—picking, sorting and packing the famous "malagas," Malaga, Spain.

*744 Picking lemons in a grove on the Conca D'Oro (Golden Shell) outside Palermo, Sicily.

COFFEE, TEA AND CHOCOLATE

Coffee, tea and chocolate are a group of substances associated with the idea of sociability. Many interesting customs center about the use of these articles, whether we consider the kaffee klatch

of Germany or the afternoon tea of the English, or the American at home.

406 Making jute coffee bags in Santa Gertrude factory, near Orizaba, Mexico.

*407 Drying coffee—on a coffee plantation near Cordoba, Mexico.

*408 Crude native method of husking coffee, at Amatlan, near Cordoba, Mexico.

418 Opening the pods and drying the cocoa beans—on plantation near Port Limon, Costa Rica.

*419 Gathering cacao pods—one of Costa Rica's most valuable products—near Port Limon.

*457 Material for 224,000 lbs. of chocolate bonbons—cacao beans curing at La Clementina, Ecuador.

*817 Picking coffee in Moschi province, East Africa.

*921 Charming valleys and mountains of Interior Ceylon—at Katugastota, near Kandy.

*922 Coolies picking coffee on Sir Thomas Lipton's estate, at Dambutenne, Interior Ceylon.

*932 Coolies unloading tea at Hankow, the great tea market of Interior China.

*973 Girls picking tea on famous plantation at Uji, among the sunny hills of old Japan.

SUGAR

Sugar is an important article of diet either from an economic or a dietetic point of view. It is a quick source of energy and is, therefore, often used by mountain climbers or those participating in athletic contests.

*89 Sugar after leaving the vacuum pan, before cutting the moulds.

90 Sugar in the moulds.

*91 Sugar in the drying ovens.

*173 The sweetest spot on earth—sugar levee beside the Mississippi, New Orleans, La.
429 A sugar plantation, Caracas, Cuba.
*430 Hauling carloads of sugar-cane into the mill, Sugar Plantation, Caracas, Cuba.
*435 Crude method of grinding sugar-cane (product 25 gallons daily), mill near Kingston, Jamaica.
*470 Harvesting sugar-cane on a great plantation between Lima and the Andes, Santa Clara, Peru.

SALT

*620 A reservoir after evaporation—turning up the salt—salt fields, Solinen, Russia.
*668 Vast salt fields with children collecting salt for stacks, Le Croisic, France.
690 Work at the snowy salt stacks of San Fernando, on marshy levels, near Cadiz, Spain.

WATER

Water serves so many purposes that it is perplexing to choose the most important. It constitutes about 70 per cent. of the animal body, serves as a carrier and diluent of food into and through the system, is a cleansing agent. The earliest civilizations were on the river banks, the most beautiful scenery is associated with the idea of water, the use of it for irrigation in the West has made "the desert to blossom as the rose."

*303 Irrigating a strawberry field, Hood River Valley, Oregon.
413 A water vender, typical of Mexico's mountain cities, Guanajuato.
*464 Ice dealers of Quito collecting snow near summit of Pichincha, Ecuador.

*469 Irrigating plains otherwise sterile, and planting sugar-cane on a farm at Santa Clara, Peru.
*475 Squaws in the mining country carrying water from Lake Paparcocha, Cerro de Pasco, Peru.
*680 Water seller on his daily round, filling a jar of primitive design, Valencia, Spain.
695 Water mains bringing water 15 miles to Lisbon, Portugal.
*797 An Egyptian shaduf, the oldest of well-sweeps, lifting the Nile waters to the fields.
*798 Irrigation in Nile Valley, Egypt.
*801 The Nilometer (measurer of inundations) on island at first cataract, Egypt.
*803 The great dam across the Nile at Assuan, Egypt.
*811 Kikuyu women with water vessels (gourds) beside village storehouses, East Africa.
*842 Oasis of Elim, where the Israelites found water; halt of a caravan to Sinai.
*885 Famous Vale of Cashmere, watered by the winding Jhelum, India.
893 Welcome fellows in thirsty India—bheestees (water-carriers) with their leather bottles—Calcutta.

HOUSEHOLD ARTS

HOUSES AND HOME LIFE

There are some words and some things of which the heart of man never grows weary, some primal needs for which he ever seeks satisfaction. There are two words, no matter in how many ways they may be interpreted, that voice a universal need,—a comfortable home. The interpretation may differ widely. The hunter's lodge, the miner's cabin, the

castle may not be your expression of a comfortable home.

We all appreciate that the house is not the home, as the body is not the spirit, but as the body serves as the means of expression for the spirit, so in the house we build and furnish, we give unconsciously perhaps our definition of home. See classification on Homes and Life of the People for fuller treatment.

*7 Stately old home of Longfellow, once Washington's headquarters, Cambridge, Mass.
8 Elmwood—birthplace of James Russell Lowell, Cambridge, Mass.
162 Oldest house in the United States, built by the Spanish about 1564—St. Augustine, Florida.
*262 Typical home of Navajo Indians, Arizona.
322 Charming Porto Rico—a pretty suburban home near Mayaguez.
*325 Aguadilla—Columbus' first landing-place on the Isle of Porto Rico.
*348 Some of our Pacific Island cousins and their home, Tutuila, Samoan Islands.
*356 A home in Ermita, P. I.
390 Interior of Fort Magnesia, Cape Sabine, Ellesmere Land.
*395 The world's most unique inhabitants—Esquimaux with summer tents, Greenland.
409 The public washing fonts—Jalapa, Mexico.
*412 Homes and home occupations of the natives of Tehuantepec Isthmus, Mexico.
*428 The courtyard of a typical Cuban home, Remedios, Cuba.

*458 Native home, made of boards—no race suicide here, Ecuador.

*459 Up-country hospitality among the natives—dinner in preparation, Riobama, Ecuador.

*517 Ancient Elizabethan house used by Raleigh, Drake, Burleigh and Monk as a club house, England.

*525 The living room in Shakespeare's house, Stratford-on-Avon, England.

*526 Ann Hathaway's cottage, Shottery, England.

530 Dove Cottage, Wordsworth's old home at Grasmere, England.

*546 The birthplace of Robert Burns, Ayr, Scotland.

568 Fireplace for burning peat, where all family cooking is done, a home in Ireland.

581 A humble mountain home at the foot of the cliffs where the Skiaeggedals Falls leap 525 ft., Norway.

*592 From the mountain inn at Vidde saeter down the Vidde Valley, Norway.

*593 People of the frigid North—Lapp home and family, near Tromsoe, Norway.

*594 A Nordfjord bride and groom, with guests and parents at their house door, Brigsdal, Norway.

*618 A characteristic country house in the heart of Russia.

*669 At grandmother's house—interior of a Breton village home, Crach, France.

*707 "Youthful years and maiden beauty"—the same in all the world, Switzerland included.

732 Beautiful home of the Vetii, buried A. D. 79, Pompeii, Italy.

*758 An Austrian hamlet, Val Ampezzo.

*816 A Wachagga village on the slopes of Kilimanjaro, East Africa.

*858 The inner court of a Damascus home, Syria.

*962 Serene simplicity of home (interior) of Count Okuma, Tokyo, Japan.

963 A Japanese hostess serving dinner in a typical Japanese home.

*980 House-building in Korea,—wall of stone and mud against a framework of grass, ropes and sticks, Seoul.

CLOTHING

This is a large subject, whether one discusses it from the economical, the hygienic, or the artistic standpoint, or from the sources and variety of materials used in it. Clothing may be worn for decoration, for protection from the elements. Sometimes a string of beads has sufficed, sometimes a belt of feathers. When Darwin gave a piece of red cloth to a native Fuegian, he was astonished to see it worn, not for clothing, but torn into bits and bound around the limbs as ornaments.

A study of textile fabrics usually begins with a study of the fibres, cotton, wool, silk and their characteristic differences and the processes by which these fibres are made into cloth. Considerable effort is being expended to teach women to be skilled buyers of household fabrics.

COTTON

*154 The carding room, great Olympian Cotton Mills, Columbia, S. C.

155 Drawing frames, in the great Olympian Cotton Mills (1,200 operators), Columbia, S. C.

*156 In a great spinning room (104,000 spindles), Olympian Mills, Columbia, S. C.

*157 Warping room in the great Olympian Cotton Mills, Columbia, S. C.

*158 Weaving room (2,400 looms), great Olympian Cotton Mills, Columbia, S. C.

*160 Cotton is king—plantation scene with pickers at work, Georgia.

*177 Cotton gins—one of the greatest industrial inventions—separating fibre from seed, Texas.

*178 Baling cotton—a powerful press just releasing a 50-lb. bale at a mill in Texas.

179 Shipping cotton from levee near growing district by cars to manufacturing center, Texas.

*180 A part of the 4,000,000 bale yearly crop of Texas.

*468 Picking cotton with Chinese labor on irrigated land at the foot of the Andes, Vitarte, Peru.

WOOL

17 Assorting wool into three grades prior to its manufacture into cloth.

*18 Feeding wool into a carding machine in a great woolen mill.

*19 Spinning wool, Maynard, Mass.

*20 Twister at work in Assobat Woolen Mills, Maynard, Mass.

21 Foster winding in Assobat Woolen Mills, Maynard, Mass.

*22 Warping machine at work in a big, up-to-date woolen mill.

23 Drawing-in preparatory to actual weaving of a woolen fabric.

*24 Looms that produce woolen fabrics, in the largest weaving room in America.

*201 Prize-winning sheep (Shropshires) in a Jackson County pasture, Mich.

*483 Sheep-raising in a sunny valley, among the Andes near Cuzco, farm buildings at right, Peru.

*543 Bargains in sheep at the Georgemas Fair, near Thurso, Scotland.

*831 Sheep grazing on the great veldts of British South Africa.

*985 Where a sheep is shorn in five minutes by electrical machinery, Newmarket, Australia.

986 Dalgetty's salesrooms, where wool buyers come from all parts of the world, Australia.

991 Drink for 5,000 thirsty sheep on a big ranch at Warrah, Australia.

FLAX AND HEMP

*361 Drying hemp, chief export of the Philippines at Cebu, P. I.

*363 Carting manila hemp to the wharf, Cebu, P. I.

*557 Bleaching field near linen mills (S. E.), Lisburn, near Belfast, Ireland.

*558 Hatcheling flax—first process in making the famous Irish linens, Belfast, Ireland.

*559 Plain weaving room (1,000 looms), in a great linen mill at Belfast, Ireland.

*650 Flax in great stacks curing in sunny fields near Courtrai, center of Belgium's linen industry.

*651 Flax taken from stacks and soaked in river Lys, preparing for spinning, Courtrai, Belgium's linen market.

SILK (PRODUCTION)

*864 Feeding the silkworms their breakfast of mulberry leaves, Syria.

*865 Cocoons of the silkworm in the mulberry bush, Syria.

867 Purchasing cocoons for export, Syria.

868 Boiling cocoons to loosen the thread ends in a large reeling mill, Syria.

*869 Close view of the boiling process and unraveling of the cocoons, reeling mill, Syria.

*870 Examining and weighing the raw silk, preparatory to shipping, Syria.
*871 Primitive method of weaving the silk in Syria.

SILK (MANUFACTURE)

92 Winding the silk (first process in the Throwster works).
*93 Doubling the thread and winding onto spools.
94 Reeling and lacing (Throwster works).
*95 Stripping the gum, and dyeing the skeins in the Throwster works.
*96 Weighting the silk in the solution of tin, to give it body.
97 Finishing the skeins of silk after weighting and dyeing.
*98 Great warping machines at work in the weaving mill.
*99 In the mammoth weaving room, showing the looms at work.
100 In the dyeing room, showing piece dyeing after the cloth is woven.
*101 Color printing in the piece, machine that prints 10 colors.
*102 Breaking, folding and pressing the silk cloth.
104 Weaving taffeta ribbon.

COSTUMES

Much of history may be gained from a study of the costume of either the orient or of colonial days. Caste and class are indicated by a very slight change in costume.

*264 Navajo blanket weaver, Arizona.
390 Cape Sabine, Alaska.
*395 Esquimaux.
*464 Ice dealer, Quito, Ecuador.

*578 Farmer's family making hay, Norway.
*594 Nordfjord bride and groom, Norway.
*600 Dalecarlian maidens, Sweden.
*601 Farmer's family, Sweden.
*609 Russia—making hay.
*626 Women hoeing sugar beets, Germany.
*642 Industrious peasants and milk-carts passing a windmill, Holland.
643 Substantial dignity of a Dutch matron, Holland.
*644 Quaint costumes of village girls beside the fishing boats.
*645 Picturesque and thrifty countrywomen, Holland.
671 Autumn in Brittany.
*707 Youthful years and maiden beauty, Switzerland.
*758 Austrian hamlet.
769 Near Corinth, Greece.
787 A crowded street in Cairo.
808 Typical Moorish shop, Algiers.
*811 Kikuyu women with water, East Africa.
*844 The bazaar of Jaffa.
*851 Grinding at the mill, Palestine.
853 Life on the shore of Galilee.
*861 Bread-making, Syria.
*863 Bedouin camp, Syria.
*866 Deadening silk cocoons, Syria.
867 Silk merchants at Antioch, Syria.
*886 Shelling rice, Cashmere, India.
918 Beautiful work from crude tools, Ceylon.
963 Japanese hostess.
64 Head of whale, showing great mass of whalebone, Long Island Beach.
*283 A nest of ostrich eggs.
397 Whaling in Baffin Bay—taking out the whale's bone (worth $8,000).
399 Floods of "sombreros," a hat store, City of Mexico, Mexico.

FUELS

The question of the kind of fuel to be preferred for home use is an important one to the housekeeper. Many have a gas stove for summer, a coal stove for winter, and a fireless cooker to prevent using either. Thus far, electricity, because of its cleanliness and the ease with which it may be managed, seems to be the most desirable, but, alas, in many regions the price is prohibitive.

109 to 116 (6 are starred) Coal in the anthracite fields, Pennsylvania.
*127 Source of gigantic fortunes—oil wells in Pennsylvania.
405 Pulque gatherers and fuel vender in a cactus lane, San Juan, Teotihaucán, Mexico.
*915 Oil wells worked with American machinery at Yanangyet, Burma.

INDUSTRIES—PREPARING MATERIAL FOR THE HOME

The statement is often made that the industries have gone from the home. Perhaps it is well to consider the other side of the question and get some faint conception of how many industries have their origin in the desire to meet some demand of the home.

*15 Expert workmen cutting leather, shoe factory, Lynn, Mass.
*16 Workmen welting shoes by machinery, shoe factory, Lynn, Mass.

122 Plate Glass Works, Tarentum, Pa.—modeling clay pots for molten glass—moving pot to drying room.

*123 Glass-making—drawing pot of red-hot liquid from the glowing furnace—men balancing its weight.

*124 Glass manufacture, Tarentum, Pa.—casting and rolling sheets of plate glass, 12½ x 31 ft.

*125 Glass making, Tarentum, Pa.—revolving iron disks grinding surface of plate glass.

*126 Workmen finishing plate glass windows in polishing room—glass works, Tarentum, Pa.

*263 Home duties of the Hopi man—a scene at the Indian village of Oraibi, Arizona.

*264 Blanket weaving—a Hopi Indian at work, Wolpi, Arizona.

*355 Making rope from the famous native hemp, Manila, Philippines.

*359 Weaving the famous pina cloth of Molo, Panay, Philippines.

415 Natives making rope from the maguey plant, Monterey, Mexico.

*416 Natives weaving matting from the fibre of the maguey plant, Monterey, Mexico.

*519 Taking clay from great pit for fine English porcelain, Bugle, England.

*520 Grinding and mixing clay for making fine porcelain ware, Worcester, England.

*521 Dipping plates in glaze preparatory to firing, Porcelain Works, Worcester, England.

*522 Throwing plates on a potter's wheel, Royal Porcelain Works, Worcester, England.

523 Turning and trimming a cup on the lathe; Royal Porcelain Works, Worcester, England.

616 Russian cloth market in "The Fair" of Nijni Novgorod, Russia.

*628 Stitching shoes in a busy factory—a growing industry, Nuremberg, Germany.

*629 Trimming and polishing heels in a large shoe factory, Nuremberg, Germany.
658 Making Gobelin tapestry (weavers behind loom see results in mirrors), Paris.
*783 Making oriental rugs in Constantinople.
784 Renewing the colors in oriental rugs, Constantinople.
*887 Humble shawl-weavers at Cashmere patiently creating wonderful harmonies of line and color, India.
918 Beautiful work from crude tools—native goldsmiths at work, Kandy, Ceylon.
968 A potter and his wheel—fashioning a vase; Kinkosan Works, Kyoto.
*969 Expert workmen creating exquisite designs in cloisonné, Kyoto, Japan.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs, suitable for wall decoration, of any subject in the above list in sizes 16 x 20—20 x 24.

LITERATURE

FOR GRADE READERS, HIGH SCHOOL AND COLLEGE ENTRANCE CLASSICS

BY

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DEAN OF SCHOOL OF EDUCATION, UNIVERSITY OF MISSOURI.

269 STEREOGRAPHS OR SLIDES OF THE 1,000 LIST WITH 429 REFERENCES TO THEM

ALSO 363 SUPPLEMENTAL STEREOGRAPHS OR SLIDES WITH 433 REFERENCES TO THEM

The aim has been to select that material in the 1,000 series which is of real interest in the study of literature as found in public school readers and in college entrance requirements, and to arrange it in such a way as to make it easily available to the busy teacher.

In order to make it practicable in the highest degree for school purposes, the material has been checked up carefully in connection with the entrance requirements of a number of the largest

Universities over the United States; also in connection with the following basic readers, which we are assured by the publishers are their best sellers.

Published by American Book Co.
- Baldwin Readers.
- Baldwin and Bender Readers.
- Brooks Readers.
- Golden Treasury Readers.
- Standard Catholic Readers.

Published by Appleton & Co.
- Carroll & Brooks Readers.

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- Blodgett Readers.
- Cyr's Readers.
- Jones Readers.
- Wade & Sylvester Readers.

Published by D. C. Heath & Co.
- Heath Readers.

Published by Houghton, Mifflin & Co.
- Riverside Readers.

Published by Newson & Co.
- Aldine Readers.

Published by Rand, McNally & Co.
- Lights to Literature Readers.

Published by Silver, Burdette & Co.
- Stepping Stones to Literature Readers.

An effort has been made to illustrate as many as possible of those selections named most frequently in the college entrance requirements and those occurring in the largest number of the standard basic readers. Of course, it has not been possible to illustrate all such selections, but the result of this checking has been very largely the determining factor. There are a few exceptions to the rule, where other selections of real merit have been illustrated.

The various selections thus illustrated have been arranged in three groups: American authors, English authors, and authors of non-English speaking countries, under the names of their respective authors. Thus, poets, essayists, historians and novelists are all brought together. To have grouped them according to the character of their work would have been difficult and unsatisfactory, owing to the fact that many were almost equally gifted along several different lines as, for example, Emerson, Holmes, Hawthorne, and Scott. The arrangement is also purely alphabetical under each of those three headings, since a chronological order, however desirable from some points of view, is not so easy for reference. This grouping, it is believed, will enable the teacher to get quickly at any author she may desire to illustrate.

In one feature only does the arrangement of this classification differ from the others, viz.: It in-

cludes a considerable number of supplementary subjects in addition to the regular subjects from the World Visualized. These supplementary subjects are all given in parentheses ( ), the catalogue number being used; and, where possible, an explanatory word after each. Otherwise, the numbers here used are the regular serial numbers from the World Visualized, which appear in heavy type in the upper right-hand corner of the stereograph. Those numbers preceded by a star (*) are the ones included in the special 600 list.

Schools desiring to add these supplementary numbers for the teaching of literature will be supplied with a typewritten classification in which the full title is used opposite the verse illustrated, as is done with the other numbers here used.

AMERICAN AUTHORS

LYMAN ABBOTT—1835.

*171 Dr. Abbott and other guests of Booker T. Washington at Tuskegee, Ala.

LOUISE ALCOTT—1832.

(11550) Old home.
(11545) Emerson's home.
9 Old North Bridge and Statue of "Minute Man" at Concord, Mass.

THOS. BAILEY ALDRICH—1836.

Guilfemus.

*496 London Bridge from Surrey side.

AMELIA E. BARR—1831.

"The Belle of Bowling Green."

*29 Castle Garden and Bowling Green, S. W. to Liberty Statue, N. Y. Harbor.

*30 Towering temples of trade crowding lower Manhattan, from the Harbor.

35 Lower Manhattan from Metropolitan tower south.

*38 Wall St., west past Sub-Treasury building to Trinity Church, N. Y. City.

39 Broad St. north to the Stock Exchange, U. S. Sub-Treasury, and Wall St., N. Y. City.

*42 Street peddlers' carts on Elizabeth St., N. Y. City.

*43 Building one of New York's greatest skyscrapers.

(10712) Up Broadway (5302) From City Hall, north.

(10714) Old St. Paul's (5304) Broadway and P. O.

(5314) The Bowery.

NOTE.—Many of the above numbers will also be found interesting in connection with Miss Barr's book, "The Maid of Maiden Lane."

WILLIAM CULLEN BRYANT—1794.

As Editor of "The New York Evening Post."

36 A section of downtown New York not far from the "Evening Post" building.

"To a Waterfowl."

(6813) Quail shooting. (6781) Plashy brink.

"The Snow Shower."

(5419) A forest of crystal.

"Hunter of the Prairies."

(6833) Kansas prairie.

"Thanatopsis."

*243	Ten miles of yawning chasm—down the Canyon from Inspiration Point — Yellowstone Park.	*"For his gayer hours she has a voice of gladness."*
*288	From Inspiration Point (E. N. E.) through the Yosemite Valley, Cal.	*"Go forth under the open sky and list to nature's teachings."*
*273	A wilderness of sand, miles from human habitations—Painted Desert, Arizona.	*"Take the wings of the morning and traverse Baracas desert."*
374	Carrying canoe past rapids on the Muskoka River, Canada.	*"Or lose thyself in that continuous realm where flows the Oregon, and hears no sound save his own dashings."*

SAMUEL L. CLEMENS (MARK TWAIN)—1835.

(8010) The humorist. (11547) His villa.

*187 An end-wheeler on the Mississippi River.

*174 Shipping on the Mississippi River.

RALPH CONNOR—1860.

*375 Winnipeg, the home city of Rev. Chas. W. Gordon (Ralph Connor).

379 to *384 (4 are starred) Scenes up in the great northwest, which Connor has revealed to a large reading public.

259 Cowboy life of which Connor has written.

JAMES FENIMORE COOPER—1789.

"The Sea Lions."

*287 Young lions on the beach at Santa Catalina Island.

"Leather Stocking Tales."

*194 Indian braves such as figure largely in these tales.

"History of the United States Navy."

*48 Warships and pleasure craft on the Hudson River.

*129 From monument over the Navy Department in Washington, D. C.

139 Admiral Dewey and officers of the U. S. Navy in Washington, D. C.

145 U. S. Battleships steaming out to sea—Hampton Roads, Va.

*422 The wrecked Maine in Havana Harbor, Cuba.

Other battleships:

(5164)—(5165)—(5166)—(5167) — (5171) — (5175)—(5177)—(5179)—(5173) — (5184) — (5191)—(5193)—(10069)—(10070)—(10071)—(5197) — (5195)—(5200)—(5221)

FRANCIS MARION CRAWFORD—1845.

Much fine material for illustrative work in connection with Mr. Crawford's productions will be found in the regular Underwood Stereoscopic Travel Tour of Italy.

RICHARD HARDING DAVIS—1864.

*822 to 827 (2 are starred) Scenes in the Belgian Congo, of which Davis has written so interestingly.

PAUL LAWRENCE DUNBAR—1872.

"Signs of the Times."

(7197) Possum. (7087) A cornfield scene.

"The Colored Soldiers."

(10739) Shaw Memorial.

Scenes in lowly life of which Dunbar has written.

*149 In a great pine forest, collecting turpentine.
172 Rapid transit in southern Mississippi.

"Folks Shouldn't Senshuh other Folks."
(7225) "Dis am de pick of dat roost."

RALPH WALDO EMERSON—1803.

Scenes in Boston, city of his birth.
(11545) Home at Concord. (11550) Alcott home.
9 Monument of "Minute Man" and North Bridge at Concord, Mass.

"The Snowstorm."
(5432) Winter scene.

"The Sphinx."
*795 Ruins of the Granite Temple, the Sphinx and Great Pyramid.
(2544) The Sphinx.

EUGENE FIELD—1850.

(10610) In Denver.

"The Naughty Doll."
(6930) "A stitch in time."

"Nightfall in Dordrecht"

*642 Industrious peasants and milk cart passing a windmill near Dordrecht, Holland. — *"The mill goes tolling slowly around with steady and solemn creak."*

*644 Quaint costumes of village girls on the wharf beside the fishing boats —Marken, Zuider Zee. — *"The sails are reefed and the nets are drawn."*

(6919) *"Sleeping dog"*

643 Substantial dignity of a Dutch matron with her dog team, Holland. *"To-morrow how proudly he'll trot you around Hitched to our new milk cart."*

"Good Children Street."

(6929) "The dancing lessons."
(6844) A pretty corner where happiness dwells.
(6947) Dinner time for the dogs and cats.

"Picnic Time."

84 A glorious May-day among the daisies.
(7048) Apple blossoms. (9418) Around May Pole.
(6887) Daisy field.

"When I was a Boy."

(6902) Tired of play.

"An Invitation to Sleep."

(10042) "On guard." (6838) "Of Nod."

"Dream, Dream, Dream!"

(6952) Gates of sleepy land. (6858) Guardian Angel.

"A Battle in Yellowstone Park."

235 to *243 (5 are starred) Scenes in Yellowstone Park.

"Pike's Peak."

*246 Gateway of the Garden of the Gods west to majestic Pike's Peak.

"The Train for Shut-Eye-Town."

(6963) "On the border of Shut-Eye-Town."
(6839) "Good Night." (6848) "Our Father."
(6931) "Child's Prayer."

NOTE.—Much more of this kind of illustration is available for those who wish it.

PAUL LEICESTER FORD—1865.

"Hon. Peter Stirling."

*42 Street peddlers' carts on Elizabeth St., New York City, showing tenements in which the Hon. Peter was deeply interested.

FRANCIS BRET HARTE—1837.

"Dickens in Camp."

*311 Mt. Tacoma from camp, Longmire Springs—Washington.	*"Above the pines the moon was slowly drifting, The river sang below."*
*292 From Clouds' Rest over Lake Tenaiya to the Matterhorn and Sierra Nevada Mts., Cal.	*"The dim Sierras, far beyond uplifting Their minarets of snow."*
(11544) Old Curiosity Shop.	*"He read aloud the book," etc.*

NATHANIEL HAWTHORNE—1804.

9 Old North Bridge at Concord, Mass., where Hawthorne lived.

(11549) House of seven gables. (5265) Birthplace.

NOTE.—Those desiring stereographs to use in connection with a study of the "Marble Faun" will find much valuable material for the purpose in the Underwood Tour of Rome for the stereoscope or in lantern slides.

OLIVER WENDELL HOLMES—1809.

Some of the haunts of Holmes at Cambridge, Mass.

*7 Longfellow's old home.

8 Lowell's old home.

(5263) Monument, Cambridge. (5262) Harvard.

"Old Ironsides."

*422 The wrecked Maine in Havana Harbor, Cuba. *"Oh, better that her shattered hulk should sink beneath the wave."*

"The Battle of Lexington."

(10703) Battlefield.

"To a Caged Lion."

(6759) Caged lion.

"Boston Commons."

*2 The State House crowning historic Beacon Hill, Boston. *"And sunlike from her Beacon Heights*
The dome-crowned city spread her rays."

(5255) Boston Common.

WILLIAM DEAN HOWELLS—1837.

"A Boy's Town." *(Pet Goat).*

*743 Goats milked while you wait in Palermo, Sicily.

(2115) Milking goats. (10039) Billy, Billy & Co.

"Venice."

*740 Venice, White Swan of Cities, from S. Giorgio Island.

741 Bridge of Sighs between a palace and a prison, Venice, Italy.

*742 Palazzo Ca d'Oro, house of an old merchant of Venice.

(2057) Lion of Venice. (2058) San Marco.

(2059) Interior. (2061) From Campanile.

(2062) Grand Canal. (2063) Rialto.

WASHINGTON IRVING—1783.

*29, *30, *38, 39 New York City, in which city Irving was born.

"Rip Van Winkle."

*57 High Bridge across Hudson from deck of river boat.

"Whoever has made a voyage up the Hudson River must remember the Catskill Mountains. They are seen away to the west of the river."

*80 Looking north along the precipitous Palisades, Hudson River.

"He saw at a distance the lordly Hudson, far below him, moving on its silent but majestic course."

*54 Looking north up the river from grounds of Military Academy, West Point.

"Others say he was drowned in a squall at the foot of Anthony's Nose."

"Rural Life in England."

*526 Anne Hathaway's cottage at Shottery, England.

"With its thatched cottage and narrow slip of ground. The trim hedge, the grass plot before the door."

"Westminster Abbey."

*502 Towers of the Abbey.

*504 Westminster Abbey, south to the Victoria tower of Parliament buildings.

"There was something congenial to the season in the mournful magnificence of the old pile."

See also supplementary numbers: (136) Exterior— (137) Choir and Nave— (11321) Tombs of Queen Mary and Elizabeth— (138) The altar.

"Stratford-on-Avon."

(160) Birthplace.

(162) The Library.

*525 The living room in Shakespeare's house, Stratford-on-Avon.

"Here he may many a time have sat when a boy watching the slowly revolving spit with all the longing of an urchin."

(167) Church at Stratford.

(166) Entrance to church.

"The Legend of Sleepy Hollow."

*80 Looking north along the Palisades to the distant east bank along the Hudson where lies Tarrytown.

"In the bosom of one of these spacious coves which indent the eastern shore of the Hudson."

*56 Washington's headquarters at Newburgh, N. Y.

"It was one of those spacious farmhouses with big ridged but lowly sloping roofs."

"Life and Voyages of Christopher Columbus."

(2032) Genoa and harbor.

(2033) Genoa from Rosazza Gardens.

*687 Shipping on the Guadalquiver River, Spain (where Columbus' ship sailed).

*325 Aguadilla, Columbus' first landing-place in Porto Rico.

"The Alhambra."

*684 The Alhambra and the Sierra Nevada.

"The journey speaks of romantic Granada surmounted by the ruddy towns of the Alhambra, while far above it the snowy summits of the Sierra Nevada shone like silver."

*685 Court of the Lions, Alhambra. *"The Court of Lions and the white marble fountain in the centre of the hall beside which the Abencerrages were beheaded."*

(2206) Gate of Justice. (2213) Court of Two Sisters.
(2217) Granada from the Generalife.
(2208) Hall Ambassadors.
(2216) The Generalife.
(2204) Torre del Nomenajo, Generalife, Granada.
(2218) Tombs of Ferdinand and Isabella.
(2211) A fountain basin in the floor.
(2207) Court of Myrtles. (2215) Old Aqueduct.

"Life of Oliver Goldsmith."

(10594) Goldsmith's grave.

"Life of Washington."

*143 Home of Washington at Mount Vernon, Va.
142 Christ Church, where Washington joined with his neighbors in worship, Alexandria, Va.
*7 Stately old home of Longfellow, once Washington's headquarters, Cambridge, Mass.
*56 Washington's headquarters at Newburgh, N. Y., 1783.
*38, 39 Glimpses of the old Federal Bldg. in New York City, where Washington was inaugurated President of the United States.
(5263) Washington elm.

HELEN HUNT JACKSON—1831.

"Ramona."

(5967) Santa Barbara Mission. (5968) Mission.
(5969) The crucifix, Santa Barbara.
*262 At breakfast—typical desert home of Navajo Indians, Arizona.

*263 Home duties of the Hopi man.
*261 A mesa village on the Hopi Indian Reservation.
*264 Blanket weaving—a Hopi Indian at work, Wolpi, Arizona.
*269 A wonder to the primitive inhabitants—Sante Fe R. R. crossing Canyon Diablo, Arizona.
*192 Home life of the Sac and Fox Indians, showing sleeping papoose, Oklahoma.
*194 Feathered and mounted braves of warlike Sioux Indians.
(6167) Navajo Indians— (6177) Indian woman's occupation.
(6179) Hopi squaw coiling clay— (6180) An Indian village.
(6181) Dance to the rain-gods— (6183) Rain makers— (6184) Indian girls weaving.
(6194) Indian home.

ABRAHAM LINCOLN—1809.

*186 Birthplace of Lincoln at Hodgensville, Ky.
*137 The White House, where Lincoln lived as President.
*107 "High-water mark" of the Civil War, Gettysburg Battlefield, where Lincoln made the memorable address.
(11103) Lincoln statue, Chicago.
(5557) Monument at Gettysburg— (5510) Independence Hall, Philadelphia.

HENRY WADSWORTH LONGFELLOW—1807.

*7 Stately old home of Longfellow at Cambridge.
(5262) Harvard— (5260) His grave— (11546) Mt. Auburn Cemetery.

"Excelsior."
(1762) Alpine hamlet— (1766) Alpine homes.
(1756) Swiss home and home-maker.
(1824) Place of avalanches.

715 World-famed monastery and dogs—Great St. Bernard Pass. *"The pious monks of St. Bernard."*

"Hiawatha."

(The introduction)

202 Typical scene along the shore of Lake Superior. *"From the great lakes of the Northland."*

(6781) Home of great blue heron.

533 Song thrush and its nest. *"I should answer I should tell you"*

534 Goldfinches — nest and eggs. *In the birds' nests of the forests."*

*238 Wild buffalo in Yellowstone Park. *"In the hoof prints of the bison."*

(6790) Haunts of nature.

374 Rapids of Muskoka River. *"And the rushing of great rivers."*

(The Peace Pipe)

*194 Warlike Sioux Indians. *"All the warriors drawn together."*

*270 From Red to San Francisco mountain in Arizona. *"On the mountains of the prairie."*

290 Nearly a mile straight down from Glacier Point, Yosemite Valley. *"From his footprints flowed a river."*

*245 Snow-streaked Mummy Range, Colo. *"From the far-off Rocky Mountains."*

*431 Cutting tobacco.

(The Four Winds)

*239 Grizzly bear in Yellowstone Park. *"From the great bear of the mountains."*

*318 Among the icebergs of Taku Inlet, Alaska. *"But the fierce Kabibonoka had his dwellings among icebergs."*

75	Great mass of frozen spray and ice-bound Niagara Falls.	*"Froze the ponds, the lakes, the rivers."*
*286	Paradise of the sea gulls, San Francisco Bay.	*"Drove the loon and sea gull southward."*
(4141)	Cormorants.	

(Hiawatha's Childhood)

*192	Indian papoose in its linden cradle.	*"Rocked him in his linden cradle* *Bedded soft in moss and rushes* *Safely bound with reindeer sinews."*
(5779)	Owls.	
533	Song thrushes and nest.	*"Then the little Hiawatha learned of every bird its language* *Learned their names and all their secrets.*
534	Goldfinch and nest of eggs.	*How they built their nests in summer,* *How the reindeer ran so swiftly."*
191	Tame deer in Missouri.	*"Leaped as if to meet the arrow."*
*582	Herd of reindeer in Norway.	
(6817)	Deer leaping.	

(Hiawatha and Mudjikeewis)

*269	A wonder to the primitive inhabitants—Santa Fe R. R. crossing Cañon Diablo, Ariz.	*"In his hand his bow of ash-wood* *Strung with sinews of the reindeer."*

*188	On the bustling levee, St. Louis.	*"So he journeyed westward, westward Crossed the mighty Mississippi."*
*246	Gateway to Garden of the Gods and majestic Pike's Peak.	*"Came into the Rocky Mountains To the Kingdom of the West-wind."*
(7975)	Minnehaha Falls.	

"Wreck of the Hesperus."

14 Reef of Norman's Woe at Cape Ann, Mass.

"The Building of a Ship."

*560 Building an ocean liner at Belfast, Ireland.

"Evangeline."

*365	Village of Grand Pre, Nova Scotia.	*"Distant, secluded, still the Little village of Grand Pre Lay in the fruitful valley."*
(8515)	Grand Pre dike—Grand Pre.	(8527) Dikes and salt meadows,
(8526)	Street in Kentville, Nova Scotia.	
(4789)	Pereau valley and Minas Basin.	
(6517)	Supposed site of church.	
(8528)	Church of Covenanters.	
(8529)	Interior of Church.	
(8518)	Near Evangeline's Well.	
(4788)	Toward Bloomidon.	
*661	Vineyards covering the sunny fields of Ay—France.	*"Such as at home, in the olden time, his fathers before him sang in their Norman orchards and bright Burgundian vineyards."*
*669	At Grandmother's home—interior of a Breton house—France.	*"Spinning flax for the loom that stood in the corner behind her."*

*364 Yarmouth harbor at high tide—Nova Scotia. *"Four days now are passed since the English ships at their anchors Ride in the Gaspereaus mouth, with their cannon pointed against us."*

(4792) Yarmouth harbor— (8523) Digby.
(4786) Digby Cut— (8524) Lighthouse, Digby.
(8525) Entrance to Digby Cut— (8516) Ancient ox-team, Nova Scotia— (8514) Port Royal.

JAMES RUSSELL LOWELL—1819.

8 Elmwood, the birthplace and home of Lowell, Cambridge, Mass.

"Vision of Sir Launfal."

84 A glorious day among the daisies. *"A day in June."*
534 Goldfinch, its nest and eggs. *"Bird's nest."*
697 Laufen Castle in Switzerland. *"A mediæval castle."*
(409) Picture gallery, Kilkenny Castle.
(1888) Gold armor of Rudolph II.
(3113) Lepers outside Jerusalem— (5438) Winter snows.
(5424) Under winter's mantle.
(5260) Sweet Auburn.

JOAQUIN MILLER—1841.

"Columbus."

(11243) Shoreless seas.

"The Sierra Nevadas."

*292 From Cloud's Rest over Lake Tenaiya to the distant Matterhorn and Sierra Nevada Mts., Cal.
(6040) Cloud's Rest to Mt. Clark.

NOTE.—A list of numerous other scenes in California can be supplied upon request.

JOHN LOTHROP MOTLEY—1814.

"Rise of the Dutch Republic."

*639 Amsterdam from Zuider Kerk over shady streets and glassy canals, Holland.

*640 Looking up tree-lined canal to old Weigh House, Amsterdam.

641 Church at Delftshaven, Holland.

*642 Industrious peasants on a dyke road west of Dordrecht, Holland.

643 Dutch matron with her dog team, Enkhuysen, Holland.

*644 Quaint costumes of village girls on wharf, Zuider Zee, Holland.

*645 Picturesque and thrifty country women with pails balanced on yokes, Goes, Holland.

*646 Miles on miles of peaceful pastures where windmills beckon to each other.

JOHN MUIR—1838.

"The Yosemite Valley."

*288 From Inspiration Point (E. N. E.) through the Yosemite Valley, Cal.

289 El Capitan, east to Half Dome, Yosemite Valley.

290 Nearly a mile straight down and only a step—from Glacier Point, Yosemite Valley.

*291 Overlooking nature's grandest scenery from Glacier Point, N. E., Yosemite Valley.

*292 From Cloud's Rest over Lake Tenaiya, to the distant Matterhorn, Sierra Nevada Mts., Cal.

NOTE.—For other views of Yosemite, see the Underwood Travel Tour of Yosemite Valley.

EDGAR ALLAN POE—1809.

"The Coliseum."

*729 A mighty monument to pagan brutality — the Coliseum, Rome. *"Vastness and age and memories old."*

(3114) Garden of Gethsemane— (1995) Walls of Coliseum.
(1996) Gray stones, all that is left of Coliseum.

JACOB RIIS—1849.

*604 Busy harbor of Copenhagen, Denmark, where Riis was born.

*605 Queen Louise Bridge and its gardens, with handsome streets at its eastern end—Copenhagen.

NOTE.—See Underwood Tour of Denmark.

"The Making of an American."

*572 Leaving old friends—waving good-byes to emigrants starting for America—Christiania, Norway.

*45 Where millions enter America, Immigrant Station at Ellis Island.

46 Immigrants just arrived, awaiting examination, Ellis Island, New York Harbor.

*47 U. S. Inspectors examining eyes of immigrants, Ellis Island, N. Y.

*30 Towering temples of trade crowning lower Manhattan, north from the harbor, N. Y. City.

*29 Castle Garden, S.W., over Liberty Statue and Harbor, N. Y. City.

*42 Street peddlers' carts on Elizabeth Street, N. Y. City.

NOTE.—See also other numbers of New York City from 29 to 48.

JAMES WHITCOMB RILEY—1854.

"Knee-deep in June."

*201 Prize-winning sheep in a Jackson County pasture, Mich.

*193 Some western corn—scene in Kansas.

534 Goldfinch's nest in an old apple tree.

"Orchards where I'd rather be—
Needn't fence it in for me!
Jes' the whole sky overhead."

"Under some old apple tree
Jes' a-restin' through and through."

"The Blossoms on the Trees."

533 Song thrush among the blossoms on the tree.

"Blossoms crimson, white and blue,
Purple, pink, and every hue."

"A Summer Day."

664 Battlefield of Sedan, France.

217 How grass and sunshine are turned into beef—steers grazing in green pastures, Ill.

"And so I walk through medderlands and country lanes and swampy trails where the long bulrushes brush my hands."

(7087) *"When the frost is on the pumpkin and the fodder's in the shock."*

THEODORE ROOSEVELT—1858.

953 President Roosevelt working for Peace. On the *Mayflower.*

See supplementary numbers showing Roosevelt in different places:—
(10023). (10003) (10512) (4953) (4935) (4941) (4939) (4949) (4946) (7660) (7661) (7832) (5101) (5113).

"Hunting Trips of a Ranchman."

239 Grizzly bear at home in the wooded wilderness of Yellowstone Park.

(6825) Bear hunting— (6798) Bear hunters.

NOTE.—In connection with a study of Col. Roosevelt's writings, much of interest may be found in the following Underwood Travel sets listed in Catalogue No. 28:—

East African Hunting Trip.
Elephant series.
Arizona.
American Indians.
Wyoming.

Animals and Birds.
Hunting scenes in America.
Also the Washington, D. C. Tour and the scenes listed under The Virginian by Wister.

JOHN G. SAXE—1816.

"The Blind Men and the Elephant."

*926	An elephant mother six months after capture—Ceylon.	*"And happening to fall against his broad and sturdy side."*
923	An elephant siesta—Ceylon.	*"The second feeling of the tusk, cried,* *Ho! What have we here, so very round and smooth and sharp."*
*924	Native farming in tropical Ceylon.	*"The third approached the animal*
Also (3509)		*And happening to take* *The squirming trunk within his hands."*
(10535)		*"The fourth reached out his eager hand.* *And felt about the knee."*
907	Elephant laborers piling timber in Rangoon, Burma.	*"The fifth who chanced to touch the ear, etc."*
(3750)		*"Then seizing on the swinging tail that fell within his scope."*

HENRY M. STANLEY—1841.

"In Darkest Africa."

Numbers 809 to 827 inclusive will be of considerable interest in connection with Stanley's narrative. For a wider variety see the Underwood Tours of East Africa and Congo.

Also much of interest may be had in connection with his writings of western life in the United States. Numbers 257, 258, 259 are merely suggestive.

EDMUND CLARENCE STEDMAN—1833.

39 Broad St. north to the Stock Exchange, N. Y. City, where Mr. Stedman was a prominent member.

*38 Wall St. west to Trinity Church.

"Sumter."

*153 Where the Civil War began—Fort Sumter in Charleston Harbor, S. C.

"Gettysburg."

(5551) Where Reynolds fell.

*107 High-water mark of the Civil War. The stone wall at Gettysburg. — *"How well the stone, the Iron Brigades their bloody outpost kept."*

(5562) Wall where the tide turned.

(5569) At the stone wall.

(5549) — *"Round Top's craggy spur."*

(5572) — *"Ground plowed with shot and shell."*

(5568) — *"Our leaders rode."*

(5547) Wheat field across which Virginians charged.

(5571) — *"Fringed with fire and smoke."*

(5565) — *"The dreadful tempest broke."*

(5569) — *"Our batteries answer."*

(5570) Repulse of Longstreet. — *"By heaven! it's a fearful sight."*

(5566) Charge of 19th.

(5572) — *"Our sheeted lightnings."*

(5572) *"And fight us hand to hand."*

62 Looking out on boisterous waves of Atlantic Ocean. *"'Twas such a flood as when ye see along the Atlantic shore The great spring tide roll grandly in with swelling surge and roar."*

(5556) Monument to Irish Brigade.

(5548) "Forget not the fallen." *"The dead who fell at Gettysburg, the land shall not forget."*

(5557) Lincoln monument.

NOTE.—Those who wish more scenes of Gettysburg are referred to the regular Underwood Travel Tour of the Battlefield.

HARRIET BEECHER STOWE—1812.

"Uncle Tom's Cabin."

*160 Cotton is king—plantation scene with pickers at work.

(5795) "Uncle Tom's Cabin," Ky.

BAYARD TAYLOR—1825.

"Reindeer Traveling."

*593 People of the frigid north—Norway. *"The deer's harness consists only of a collar of reindeer skin around the neck with a rope at the bottom, which is fastened to the bow of the pulk."*

*582 Herd of reindeer and Hardanger Glacier, Norway.

"The Mountains."

379 The Three Sisters from the Bow River, Canada. *"O summits vast, that to the climbing view In naked glory stand against the blue."*

*700 The backbone of Europe from Mt. Pilatus, Switzerland.

*701 Sisikon and the mighty Ur-Rothstock, Switzerland.
*891 Up to the everlasting snows of Mt. Kinchinjanga, India.

"Bedouin Love Song."

*863 A Bedouin camp in the mountains of Abarim, Syria.
*862 Bedouin women churning—typical interior of a big tent, Syria.

JOHN TOWNSEND TROWBRIDGE—1827.

"Darius Green."

*60 Curtis in his bi-plane just ready for flight.
144 The Wright aeroplane in flight at Fort Myer, Va.

HENRY VAN DYKE—1852.

"The Glacier."

*710 Huge ice river—Fiescher Glacier, Switzerland.

"At dawn, in silence, moves the mighty stream."

"Sea Gulls of Manhattan."

*286 Paradise of the sea gulls E. across San Francisco Bay.

"Circling, soaring, sailing, swooping, lightly down, to glean your harvest from the wave."

(5282)

"Here the Hudson flows."

*44 New Jersey ferryboat bringing morning business crowds into New York City.

"From the crowded boats that cross the ferries."

*29 Castle Garden over Statue of Liberty and Harbor.

"While the river flows to meet the sea."

"Who Follows the Flag."

36 Singer Bldg. and City Investing Bldg., N. Y. City.
(10712) Broadway, "With its populous cliffs."

"All day long in the cities' canyon street,
With the populous cliffs alive on either side."

(5263) Washington Elm, Cambridge.
*29 Bowling Green.
(5314) Along the Bowery— (5302) Broadway.
(11260) "Little pilgrims, prematurely worn."
(5670) "Bound to service of the whirling wheels."

CHAS. DUDLEY WARNER—1829.

"A-Hunting of the Deer."

191 Tame deer in Missouri.
*582 Herd of wild reindeer in Norway.
(6790) Monarch of the woods.
(6803) A shot at a buck.
(6817) A double kill— (6808) Morning's work—
(6804) Floating buck to camp.

"How I killed a Bear."

239 Grizzly bear in Yellowstone Park.
(6798) Bear hunters and victim—
(6825) Bear hunting in Wyoming.
(6797) Hanging the bear.

BOOKER T. WASHINGTON—1858.

*171 Booker T. Washington and guests, Tuskegee Institute, Ala.
*170 Colored students plowing at Tuskegee Institute.
(5095) Washington— (7832) Roosevelt and Washington.

"Up from Slavery."

(5679) Cabins where slaves were raised for market.

DANIEL WEBSTER—1782.

(11548) Birthplace.
26 The home of Daniel Webster at Franklin, N. H.
1 Bunker Hill Monument where Webster made two famous orations.
*4, *5 Faneuil Hall, which often resounded to the voice of Webster, Boston.

*3 Old South Church, where Webster frequently spoke—Boston.

*129 From the monument, looking north over Lafayette Square, where Webster lived in Washington, D. C.

*132 The United States Capitol, in which Webster made his famous reply to Hayne, Washington, D. C.

*2 The State House, where Webster served his State, Boston.

WALT WHITMAN—1819.

"To the Flag."

(4874) *"In other scenes have I observed thee, flag."*

(5569) *"Bunting to tatters torn upon thy splintered staff."*

JOHN GREENLEAF WHITTIER—1807.

"Snow-Bound."

(5422) *"Old sights took marvelous shapes."*

(6941) *"With mittened hands."*

(628) *"We cut the solid whiteness through."*

(629) Great snow tunnel.

(7936) In trappers' huts—

(6806) Camp fire.

*107 "High-water mark" of Civil War — Battlefield of Gettysburg, where this prophecy was fulfilled in July, 1913.

Till north and south together brought
Shall own the same electric thought
In peace a common flag salute."

(3096) *"Gray olive slopes."*

(5424) *"Pine boughs winter weighed."*

*79 A drive through a forest of crystal, Prospect Park.

"We heard once more the sleigh-bells sound

*417 Over banana plantation at Zent in Costa Rica. *"In Costa Rica's everglades."*

*771 Over modern homes in ancient Sparta, to Taygetos Mountains, Greece. *"And up Taygetos' winding slope."*

(5809) *"Lilies floating in pond."*

"The Shoemakers."

*259 Examining a brand, ranch in Arizona. *"For you the Indian on the plain his lasso-coil is throwing."*

9397 Indian chief skinning a buffalo.

258 Moving a herd in Arizona. *"For you from Carolina's pine the resin gum is stealing."*

*149 In a great pine forest — collecting turpentine, N. C. *"For you upon the oak's great bark the woodman's axe is smiting."*

*294 A monster sequoia just felled—the axe and woodmen who felled it. *"For you round all her sheltered homes bloom England's thorny hedges."*

*526 Anne Hathaway's cottage at Shottery, Eng.

515 Quaint cottages of Shanklin, Isle of Wight.

"The White Mountains."

*27 In the charming White Mountains, N. H.

See also supplementary numbers—(5237) (5242) (5243).

"Faneuil Hall."

*4 Faneuil Hall, Boston, west from Quincy Markets.

*5 The Cradle of Liberty—Faneuil Hall—interior view.

"The Huskers."

*200	Twentieth century harvester cutting and binding corn in Michigan.	*"On the cornfields and the orchards and softly pictured woods."*
(7087)	*"When the frost is on the pumpkin and the fodder's in the shock."*	

"The Pine Tree."

39	Broad St. north to the Stock Exchange, New York City.	*"Tell us not of banks and tariffs, Cease your paltry peddler cries."*
*160	Cotton is king — Georgia.	*"Would ye barter man for cotton?"*

ELLA WHEELER WILCOX—1855.

"The Statue."

(1572)		*"Fair shapes pursue him."*
735	Huge blocks of world's finest marble in quarries, Carrara, Italy.	*"The marble waits, how beautiful, how pure That gleaming substance."*
(2424)	Ancient statue.	*"And it shall endure."*

WOODROW WILSON—1856.

*138 President Wilson and his cabinet, Washington, D. C.

(11252) At desk— (11352) His Inaugural.

(11094) Greeting friends.

OWEN WISTER—1860.

"The Virginian."

*257 Among the 30,000 cattle on Sierra Bonita ranch, Ariz.

258 Moving a herd on Sierra Bonita Ranch, Ariz.

*259 Cowboys roping a yearling to examine brand.

(6294) (6295)

ENGLISH AUTHORS

JOSEPH ADDISON—1672.

511 At Oxford—north to picturesque tower of Magdalen College, Eng.

(11315) High Holborn St.— (9387) Addison's walk, Oxford.

SIR EDWIN ARNOLD—1832.

"Niagara Falls."

*69 "Niagara, thou eternal drop from God's right hand."

70 Majestically grand, the falls from the "Maid of the Mist."

*71 Tireless Niagara—Horseshoe Falls.

*72 Marble whiteness of American Falls.

73 Looking in the Cave of the Winds.

74 Nature's everlasting smile.

*76 The Whirlpool Rapids from the steel bridge.

*77 Autumn beauties along Niagara's banks.

ROBT. BROWNING—1812.

*736, 737 Florence, where Browning lived for years.

*740, 741, *742 Venice, which he loved and where he died.

"In a Gondola."

*740, (2057) Gondola scenes in Venice.

"By the Fireside."

*525 Fireside in Shakespeare's old home.

Verse II *"I shall be found by the fireside."*

*586 Grytereids glacier in Norway across Lake Olden.

Verse IX *"Does it feed the little lake below?"*

Verse IX

718 Mont Blanc, monarch of European Mts. *"Where Alp meets heaven in snow."*

Verse X

717 Frightful Alpine precipices—Aiguille Rouge to Mt. Blanc. *"On our other side is the straight-up rock."*

"The Boy and the Angel."

(1969) Vatican— (1968) St. Peter's Dome.
(1978) Crowning of the Pope.

ELIZABETH BARRETT BROWNING—1809.

"Aurora Leigh" **(*That England*).**

*524 The river Teme at Ludlow, Eng. *"Such nooks of valleys lined with orchises."*

(212) *"An open pasture."*

SIR EDWARD GEORGE EARLE LYTTON BULWER—1805.

"Last Days of Pompeii."

732 Beautiful home of the Vetii at Pompeii, Italy.
*730 Naples and smoking Vesuvius, Italy.
*731 In the wilderness of lava at base of Vesuvius, Italy.
(2016) Ruins of Herculaneum— (2017) Road to Vesuvius.
(2019) Crater of Vesuvius.
(2020) Forum and Vesuvius— (2021) Model ruins.
(2022) Wheel tracks—street in Pompeii.
(2023) Home of Marcus Lucretius.
(2025) (2026) (2027) (2028) Relics unearthed.

EDMUND BURKE—1728.

*556 Trinity College, Dublin, where Burke was a student.

ROBT. BURNS—1759.

*546 Birthplace of Robert Burns, Ayr, Scotland.
(7527) Where Burns died.

(7522) Monument, Ayr— (7523) Monument from Auld Brig— (7526) Auld Kirk of Ayr.

"The Brigs of Ayr."

(7524) Brig O'Doon— (7525) Twa Brigs.

"Address to Edinburgh."

*537, *538, 539 Scenes in Edinburgh, Scotland.

(7459) (7462) (7463) (7464) (7465) (7467) (7468) (7469) (7470) Other scenes in Edinburgh.

"Bruce's Address at Bannockburn."

(7532) Where Wallace gathered the Scots. (7817) Battlefield of Bannockburn.

LORD BYRON (GEORGE GORDON)—1788.

(7498) Aberdeen— (9379) At Cambridge— (2032) Genoa, loved by Byron.

(1808) Castle of Chillon.

(First Canto)

"Childe Harold."

		Verse I
773	From mountain heights over Delphi—Greece.	*"Yes! sighed o'er Delphi's long deserted shrine."*
		Verse XIII
*518	The boundless ocean from the cliffs at Land's End, Eng.	*"Adieu, adieu! My native shore fades o'er the waters blue."*
		Verse XIII
*595	Over the Cliffs of Spitzbergen and Arctic Ocean, Norway.	*"And now I'm in the world alone Upon the wide, wide sea."*
		Verse XVI
693	Castle of St. George and city from the Tagus, Lisbon, Portugal.	*"What beauties doth Lisbon first unfold! Her image floating on that noble tide."*

		Verse XIX
*681	Cork oaks partly stripped of bark.	*"The cork trees hoar that clothe the shaggy steep."*
		Verse XXXII
*684	Alhambra and snowy Sierras — Granada, Spain.	*"Or dark Sierras rise in craggy pride."*
		Verse LXV
*687	Shipping on Guadalquiver River from bridge of Isabel to Golden Tower, Seville.	*"Fair is proud Seville."*
		Verse LXV
689	Cadiz and Cathedral from Watch Tower to the open Atlantic.	*"But Cadiz rising on the distant coast* *Calls forth a sweeter though ignoble praise."*

(Bull Fight)

		Verse LXVIII
688	The Espada giving a bull his death blow—end of bull fight, Seville.	*"The thronged arena shakes with shouts for more."*
(2277)	Verse LXIV	*"In costly sheen."*
(2283)	Verse LXXV	*"The mighty brute."*
(2286)	Verse LXXVI	*"Dart follows dart."*
(2281)	Verse LXXVII	*"Again he comes nor dart nor lance avail."*
(2282)	Verse LXXVII	*"One gallant steed is stretched."*
(2284)	Verse LXXVIII	*"Full in the center stands the bull at bay."*
(2280)	Verse LXXVIII	*"Shake the red cloak."*

(2285) Verse LXXVIII — *"'Tis past—he sinks upon the sand."*

(2287) Verse LXXIX — *"After last bull is dead."*

(2288) Verse LXXX — *"Such the ungentle sport."*

(Second Canto)

Verse I

*764, *765 From west wall of the Parthenon over modern city of Athens, Greece.

"Goddess of wisdom, here thy temple was
And is, despite of war and wasting fires."

Verse X

*767 Splendid columns of temple of Olympian Zeus at Athens — to which he here refers.

"Here, son of Saturn, was thy favorite throne."

Verse LXI

787 A crowded street in Cairo, Egypt.

"Here woman's voice is never heard; apart

788 A ship of the desert outside Cairo, Egypt.

And scarce permitted, guarded, veiled to move."

*858 The inner court of a Damascus home—Syria.

"In marble-paved pavilion where a spring
Of living water from the center rose."

Verse LXXIII

774 "Go tell to Sparta," etc. — Thermopylæ, Greece.

"In black Thermopylæ's sepulchres strait."

Verse LXXIX

780, *781 The Bosphorus at Constantinople, Turkey.

"Nor oft have I seen such sight nor heard such song,
As wooed the eye and thrilled the Bosphorus along."

Verse LXXXIX

*768 "The mountains look on Marathon and Marathon looks on the sea." Greece.

"The battlefield where Persia's victim horde
First bow'd beneath the brunt of Hella's sword."

(Third Canto)

Verse XIII

*747 In the Strait of Messina.

"Where rose the mountains, there to him were friends;
Where rolled the ocean, thereon was his home."

*796 Desert scene.
*818 Forest.
147 Cavern.
*476 Breakers' foam.

"He had the passion and the power to roam the desert, forest, cavern, breakers' foam."

Verse XXI

*647, 648 Scenes in Brussels, Belgium, within sight of Waterloo.

"There was a sound of revelry by night
And Belgium's capital had gathered there."

Verse XLV

*705 The Jungfrau Mountain, Switzerland.

"He who ascends to mountain tops shall find
The loftiest peaks most wrapt in clouds and snow."

Verse LX

636 Lorelei rocks on the Rhine.

"And many a rock which steeply lours
And noble arch in proud decay."

Verse LVI

637 Across the Rhine from Coblenz to Ehrenbreitstein.

"By Coblenz, on a rise of gentle ground
Here Ehrenbreitstein with her shattered wall."

		Verse LXII
*700	The backbone of Europe from the lofty Pilatus, Switzerland.	*"But these recede, above me are the Alps."*

(Fourth Canto)

		Verse I
741	Bridge of Sighs, Venice.	*"I stood in Venice on the Bridge of Sighs* *A palace and a prison on each hand."*
		Verse I
*740	Venice, "white swan of cities."	*"I saw from out the wave her structures rise."*
		Verse III
(2057)	Lion of Venice.	
*742	Palazzo Ca d'Oro on the Grand Canal of Venice.	*"In Venice, Tasso's echoes are no more,* *And silent rows the songless gondolier."*
		Verse IV
(2063)	Rialto, Venice.	
		Verse XIII
(2058)	San Marco, Venice.	
		Verse XLVI
*726	Rome, east from St. Peter's Dome.	*"Rome—Rome imperial, bows her to the storm."*
		Verse LVII
*736	Florence and the Arno N.W. from San Miniato, Italy.	*"Ungrateful Florence! Dante sleeps afar," etc.*
		Verse LXI
737	The Duomo, "the very great heart" of Florence.	*"There be more things to greet the heart and eyes."*

		Verse LXXIII
*705	The Jungfrau from summit of Scheldegg, Switzerland.	*"But I have seen the soaring Jungfrau near."*
		Verse LXXIII
717, 718, *719	Glaciers on Mont Blanc.	*"Glaciers of bleak Mont Blanc both far and near."*
		Verse LXXIV
*776	Mt. Olympus.	*"Athos, Olympus, Aetna, Atlas made."*
746	Mt. Aetna.	
		Verse LXXIX
725	The Tiber and its Island from the S.E., Rome.	*"Dost thou flow Old Tiber! Through a marble wilderness."*
		Verse LXXX
(1966)	(1967) Rome.	
		Verse CX
*728	Roman Forum S.E. from Capitol to Arch of Titus.	*"Whose arch or pillar meets me in the face, Titus or Trajan's!"*
(2000)	Trajan's Forum and Column.	
		Verse CXII
*728	The Roman Forum.	*"And still the eloquent air breathes, burns with Cicero."*
(1990)	Forum.	
		Verse CXLIII
(1996)		*"A ruin, yet what ruin."*
		Verse CXLIV
(1995)	This magic circle (Coliseum).	
		Verse CXLV
*729	A mighty monument to pagan brutality—the Coliseum at Rome.	*"While stands the Coliseum, Rome shall stand."*

		Verse CXLVI
(1967)	The Pantheon.	
		Verse CLII
*726	Tomb of Hadrian from St. Peter's Dome.	*"Turn to the mole which Hadrian reared on high."*
(1984) (1985)	St. Angelo's Castle.	
		Verse CLIII
(1970)	St. Peter's, "the vast and wondrous dome."	
		Verse CLIII
778	From fireman's watch tower over St. Sophia —Constantinople.	*"I have beheld Sophia's bright roof swell."*
		Verse CLVII
(2066)	Portico of St. Peter's (detail view).	
		Verse CLX
(2073)	Vatican.	
		Verse CLX
(1982)	"Laocoön's torture."	
		Verse CLXXVIII
(6790)	Pathless woods.	
62	Looking out on the boisterous waves of the Atlantic.	*"There is rapture in the lonely shore."*
*518	The boundless ocean from the cliffs at Land's End, England.	*"There is society where none intrudes* *By the deep sea, and music in its roar."*
		Verse CLXXIX
*595	Over cliffs of Spitzbergen, and Arctic Ocean.	*"Roll on thou deep and dark blue ocean,* *Ten thousand fleets sweep over thee in vain."*

THOMAS CARLYLE—1795.

(7529) Birthplace— (7474) University of Edinburgh.

GEOFFREY CHAUCER—1328.

"The Canterbury Tales."

*512 Cathedral choir in Canterbury Cathedral, the shrine toward which the pilgrims journeyed.

(11332) Canterbury Cathedral— (171) Cloisters of Cathedral.

(11331) West Gate and Fallstaff Inn.

SAMUEL COLERIDGE—1772.

"To a young Ass."

*569 The picturesque home of a prosperous farmer, County Kerry, Ireland.

"Poor little foal of an oppressed race,
I love the languid patience of thy face."

"On Revisiting the Sea Shore."

*518 The boundless ocean from the cliffs at Land's End, England.

"God be with you, gladsome ocean,
How gladly greet I thee once more."

WILLIAM COWPER—1731.

"John Gilpin's Ride."

*501 Fleet St., London.

"A trainband captain eke was he
Of famous London town."

500 Cheapside, west past Bow Church—London.

"The stones did rattle underneath
As if Cheapside were mad."

THOMAS DE QUINCEY—1785.

530 "Dove cottage" at Grasmere, home of Wordsworth, and where later De Quincey lived for over twenty years.

CHARLES DICKENS—1812.

(140164) Old Curiosity Shop— (11315) High Holborn St.

"Pickwick Papers."

(115) The Strand, at west end of which was the old Hungerford Market.

*501 Fleet St., at the north end of which, in Farringdon St., was the site of old Fleet Prison, celebrated in "Pickwick Papers."

JOHN DRYDEN—1631.

"Hunting Song."

516 After a hard run with the otter pack. (10181) *"With horns and hounds I waken the day."*

*586 Grytereids glacier and Lake Olden (shows herd of wild goats). *"And chase the wild goats O'er the summits of the rocks."*

MARIAN C. EVANS (GEORGE ELIOT)—1819.

"Romola."

*736 Florence and the Arno N.W. from San Miniato, Italy.

737 The Duomo of Florence.

(2042) Palazzo Vecchio— (2049) Ponte Vecchio.

(2043) (2045) (2046) (2047) (2048) (2050) and (2051) Other scenes in Florence, Italy.

OLIVER GOLDSMITH—1728.

*501 Fleet St., London (This street was a familiar haunt of Goldsmith.)

(106) Ludgate Hill, east to St. Paul's, London. At the corner of St. Paul's next to Ludgate Hill is the site of the shop of John Newbery, immortalized by Goldsmith, for whom he is said to have prepared *"Goody Two Shoes."*

*556 Trinity College, Dublin, where Goldsmith studied.

(11543) Old Cheshire Cheese— (10594) Goldsmith's tomb.

THOMAS GRAY—1716.

*509 Windsor Castle on the south side of the Thames. Opposite on the north side is Eton, where Gray spent his schooldays.

"Elegy in a Country Churchyard."

(11326) The churchyard at Stoke Pogis.

FELICIA (BROWNE) HEMANS—1793.

"The Landing of the Pilgrims."

*476 Where the waves dash high on the coast of Peru.

"The breaking waves dashed high
On a stern and rock-bound coast."

(11243) *"The heavy night hung dark."*

THOS. HOOD—1798.

"The Bridge of Sighs."

741 Bridge of Sighs between a palace and a prison, Venice.

DR. SAMUEL JOHNSON—1709.

*501 Fleet St., where Dr. Samuel Johnson toiled over his dictionary (in Gough Square), and where he spent his last years (in Bolt Court).

(11543) Cheshire Cheese Inn, where Johnson was a frequent visitor.

(115) The Strand and St. Clement Danes.

BEN JONSON—1574.

*501 Fleet Street, London, where Jonson was a conspicuous figure 300 years ago.

(7480) Edinburgh— (7481) Hawthornden.

REV. ELIJAH KELLOGG.

"Spartacus to the Gladiators."

*771 Looking over modern homes in ancient Sparta.

*768 Battlefield of Marathon, Greece.

*729 A mighty monument to pagan brutality—the Coliseum, Rome.

725 The Tiber and its Island from the S.E., Rome.

(6759) "Lion in his den."

"My ancestors came from Old Sparta."

"My grandsire, an old man, was telling of Marathon."

"To-day I killed a man in the arena."

"And he shall pay thee back until the Yellow Tiber is red as frothing wine."

RUDYARD KIPLING—1865.

*835 Lord Robert's army advancing toward Johannesburg, So. Africa.

"Kim."

*883 Bombay Station.

(3445) Old Zamzama gun—Lahore— (3444) The Bazaar.

(3461) Bazaars, Simlah— (3549) Viceregal Lodge, Simlah.

"On the Road to Mandalay."

*910, 911 Mandalay, Burma.

(9028) Mandalay, Burma.

"Mine own People."

(3444) (3446) (3445) Scenes in Lahore, which he describes.

NOTE.—See Underwood Travel Tour of India, China, Burma and Ceylon for further illustrations of Kipling.

J. SHERIDAN KNOWLES—1784.

(7519) Necropolis at Glasgow.

"William Tell to His native Mountains."

*701	Sisikon and the mighty Ur-Rothstock, Switzerland.	*"O sacred forms, how proud you look! How high you lift your heads into the sky, How huge you are, how mighty, and how free!"*
*698	Lucerne and lofty Pilatus.	*"Heavens! with what pride I used to walk these hills."*
*700	Backbone of Europe from the summit of Pilatus.	*"Or as our peaks that wear their caps of snow, In very presence of the regal sun."*
702	Tunnels of the Axenstrasse overhanging Lake Lucerne.	*"Yes, I have often sat in my boat, When midway o'er the lake."*
(1748)	Lake Lucerne from Axenstein.	

FRANCIS MAHONEY—1804.

"The Bells of Shandon."

(401) St. Anne Shandon Church, Cork.

(8340) Vatican at Rome.

*659	Notre Dame Cathedral in Paris.	*"And cymbals glorious swinging uproarious In the gorgeous turrets of Notre Dame."*

(1970) Tower of Ivan (showing bell) Kremlin.

778 From fireman's tower over St. Sophia and Bosphorus, Constantinople.

779 Interior of St. Sophia, Turks at prayer.

"In St. Sophia the turkman gets,
And loud in air calls man to prayer
From tapering summits of tall minarets."

JOHN MILTON—1608.

*501 Fleet St., east past St. Bride's Church, in the churchyard of which was the house where Milton wrote for several years.

"On May Morning."

84 A glorious May day among the daisies.

*602 Happy crowds celebrating the Spring Festival Jonkoping, Sweden.

*964 The groves were God's first temples—avenue of old cryptomerias at Nikko, Japan.

*524 The River Teme at Ludlow, Eng.

"Hail! bounteous May, that doth inspire
Mirth and youth and warm desire."

"Woods and groves are of thy dressing."

"Hill and dale doth boast thy blessing."

MARY RUSSELL MITFORD—1787.

"Rienzi to the Romans."

*728 The Roman Forum S.E. from the Capitol.

(1988) Palace of Senators. (Rienzi slain at left foot of stairs.)

"Hear me ye walls that echoed to the tread of either Brutus."

JAMES MONTGOMERY—1776.

"The Pelican Islands."

*165 Pelican Islands, Florida.

SIR THOMAS MOORE—1779.

"The Light of the Harem."

*885 An earthly paradise—the famous Vale of Cashmere, India.

"Lalla Rookh."

*885 An earthly paradise, Vale of Cashmere, India.

*886 Shelling rice, and gossiping with neighbors, Cashmere, India.

*887 Humble shawl weavers of Cashmere.

(3448) Road near Cashmere— (8451) Land of Lalla Rookh— (3451) Vale of Cashmere.

MRS. CAROLINE ELIZABETH NORTON—1777.

"Bingen on the Rhine."

*805 to 808 (2 are starred) Scenes in Algiers. *"A soldier of the Legion lay dying in Algiers."*

*635 Ehrenfels Castle across the Rhine to vine-clad hills of Bingen. *"On the vine-clad hills of Bingen— Fair Bingen on the Rhine."*

(10458) "Down the pleasant river" at Bingen.

ALEXANDER POPE—1688.

*507 A scene in the Gardens of Hampton Court Palace, famed as furnishing the setting for the "Rape of the Lock."

"Pastorals." (***Spring.***)

*509 Windsor Castle from across the Thames, England. *"Nor blush to sport on Windsor's blissful plains."*

(6772) Nightingale's nest.

*460	Plowing (with oxen) in Ecuador.	*"While yon slow oxen turn the fertile plain."*
510	The Thames at Henley, England.	*"Blest Thames' shore the brightest beauties yield."*
*507	Trim First Pioneers at Hampton Court, Eng.	*"All Nature laughs; the groves are fresh and fair."*

"Pastorals." (*Windsor Forest.*)

*776	Mount Olympus, on whose summit dwelt the gods of ancient Greece.	*"Not proud Olympus yields a nobler sight."*
*79	A drive through a forest of crystal.	*"When frosts have whitened all the naked groves."*

JOHN RUSKIN—1819.

(224) Home of Ruskin.
(11340) Warwick Castle.

NOTE.—See Underwood Travel Tour of Italy (stones of Venice, etc.).

SIR WALTER SCOTT—1771.

*537 National Gallery, Scott monument, Princes St. and Carlton Hill, N.E. from Castle, Edinburgh, Scotland.

*538 Princes St. and Scott monument, Edinburgh, Scotland.

(7482) Abbotsford— (7483) Scott's library— (7487) Burial place— (7474) University of Edinburgh.

"Bonnie Dundee."

(7460) Castle, Edinburgh.

"Marmion."

Canto VI:

541 Tantallon Castle, where Douglass and Marmion faced each other. — *"While in Tantallon's towers I stand."*

539 Holyrood Palace, old house of ill-fated Mary, Queen of Scots, Edinburgh, Scotland.

(7473) Old fountain, Holyrood.

NOTE.—Also the Abbott and Waverley.

"Lady of the Lake."

Canto I: 6

552 The Brig O' Turk at Glenfinlas in the Trossachs. — *"And when the Brig O' Turk was won*
The headmost horseman rode alone."

Canto I: 14

*553 Ellen's Isle, the peaceful retreat of Scott's "Lady of the Lake," Lake Katrine. — *"Loch Katrine lay beneath him, rolled*
In all her length far-winding lay,
With promontory creek and bay
And Islands."

Canto II: 16, 25.

"Now might you see the tartans brave
And plaids and plumage"

or

*542 Scotland's pride, the great Forth bridge — *"The belted plaid and tartan hose*

and the Highland kilt.

Did ne'er more graceful limbs enclose.
His flaxen hair, of sunny hue,
Curled closely round his bonnet blue."

Canto III: 14.

551 Ben Venue, veiled in Highland mists from across Loch Achray.

"So swept the tumult and affray
Along the margin of Achray."

Canto V: 7.

550 From Stirling Castle west up the beautiful Forth Valley toward the Trossachs, Scotland.

"Deep waving field and pastures green
With gentle slopes and groves between
These fertile plains, that softened vale
Were once the birthright of the Gael."

Canto VI: 18.

(7534) "Old stone bridge."

Canto V: 22.

*547 Stirling Castle, seat of old-time kings, Scotland.

"With trailing arms and drooping head
The Douglas up the hill he led,
And at the castle's battled verge
With sighs resigned his honored charge."

Canto VI: 2.

"At dawn the towers of Stirling rang
With soldier-step and weapon clang."

Canto VI: 3.

753 Imperial armory, Vienna, shows similar armor that has actually been worn.

"All have arms, well trained to wield
The heavy halbert, brand and shield."

Canto VI: 15.

551 Ben Venue from across Loch Achray.

"The minstrel came once more to view
The eastern ridge of Ben Venue
For, ere he parted, he would say
Farewell to lonely Loch Achray.
Where shall he find, in foreign land
So lone a lake, so sweet a strand!"

Canto VI: 19.

*553 Ellen's Isle and Lake Katrine.

(7539) "Where the rude Trossachs."

"Where the rude Trossachs' dread defile
Opens on Katrine's lake and isle."

(7541) Rowing on Katrine.

"The Lord of the Isles."

(7507) Oban and hills "Lord of the Isles" ruled a realm of this sort.

(7510 Staffa coast. (7508) Main street of Oban.

(7511) (7512) Giant's Causeway, Staffa coast.

"Lay of the Last Minstrel."

Canto I Armor of a knight.

753 Imperial armory, Vienna.

Canto II Melrose Abbey.

*540 Melrose Abbey, the shrine of historic tradition and romantic story.

(7484) Great east window.
(7485) Beautiful Melrose.

"Rob Roy."

(7518) Cathedral of Glasgow. Rob Roy made appointment on bridge. (7513) Glasgow Bridge.

"Kenilworth."

(213) Kenilworth Castle.

WILLIAM SHAKESPEARE—1564.

*525 Living-room in Shakespeare's home at Stratford-on-Avon, Eng.
*526 Anne Hathaway's cottage at Shottery, Eng.
(160) Birthplace. (162) His library. (167) Church at Stratford. (166) Entrance to Church. (169) Memorial Theatre.

"King Lear."

Act IV., Scene 6.

*513 Shakespeare cliffs at Dover, England.

"Come on, Sire, here's the place, stand still!
How fearful and dizzy 'tis to cast one's eyes so low."

"Two Gentlemen of Verona."

(2054) Ponte Pietra and Castle, Verona. (2055) Amphitheatre, Verona.

"Richard III." Act III, Scene 4.

*498 Tower of London, famous old palace and prison of Royalty.
(11310) Grim walls of tower. (123) Warders at tower—16th century costume.
(10589) Headman's axe and block. (122) Crowns and scepters.

"Merry Wives of Windsor."

*509 Windsor Castle from across the Thames. Eng.

"Othello." **(*The Moor of Venice.*)**

Act I, Scene 1.

(2057) Street scene, Venice.

"King Henry VI." **(*Part I*)**

Act I, Scene 1 *Westminster Abbey.*

*504 Westminster Abbey south to Victoria tower of Parliament buildings, London.

(136) Westminster. (137) Westminster interior.

*502 Houses of Parliament and towers of the Abbey.

Act I, Scene 3 *Before the gate of the Tower of London.*

*498 Tower of London—famous old palace and prison of Royalty.

Act III, Scene 2 *Plains near Rouen, France.*

(9618) Rouen.

"King Henry VI." **(*Part II*)**

Act IV, Scene 1 *Seashore near Dover, Eng.*

*513 The Shakespeare Cliffs at Dover, Eng.

"Merchant of Venice."

Act I, Scene 1 *On a street in Venice.*

*740 Venice, "white swan of cities" gives good general idea of city.

Act I, Scene 3 *Shylock says "In the Rialto you have rated me."*

(2063) The Rialto.

Act II, Scene 1 *In a room in Portia's house.*

(2001) Typical interior of a splendid Italian home.

*742 Palazzo Ca d'Oro, home of an old merchant of Venice.

"Henry V."

Act II, Scene 1. (122) Crowns and scepters.

Act II, Scene 1. 500 A street in London.

Act II, Scene 4. (1588) Room in Old French Royal Palace.
Act III, Scene 2. (9618) Rouen, France.

"Julius Cæsar."

Act I, Scene 1. *On the occasion of a triumphal procession.*
(1997) Via Sacra, over which Rome's pageants passed.
Act II, Scene 2. *In a room in Cæsar's palace.*
732 Beautiful home of the Vetii at Pompeii shows how fine Roman houses were planned.
Act III, Scene 1. *In a street near the Capitol.*
(1988) Palace of Senators (close by spot).
Act III, Scene 2. Where Brutus and Anthony made their speeches, is supposed to be in the Forum.
*728 The Roman Forum southeast from the Capitol shows the ground in question.

EDMUND SPENSER—1552.

"The Faerie Queene."

753 Imperial Armory, Vienna, Austria, showing armor such as that referred to in this poem.
(1887) Armor of Emperor Ferdinand I. (1888) Armor of Rudolph II.

ROBERT LOUIS STEVENSON—1850.

(7474) University of Edinburgh.

"Edinburgh."

(7459) (7460) Castle. (7475) St. Giles. (565) St. Giles (interior).
(7476) Martyrs' memorial.

ALFRED TENNYSON—1810.

*562 Looking southwest over Giant's Causeway, Ireland. *"Break, break, break, on thy cold gray stones, O sea!*

"Defence of Lucknow."

(3614) Memorial to Sir Henry Lawrence, Lucknow.

"King Arthur."

670 Where Atlantic surges beat on rock-bound coast of Finisterre. (Looking toward Island where Arthur was born.)

"The Brook."

(6781) Home of great Blue Heron. (635) Waters making sudden sally.

552 The Brig O'Turk and glassy Glenfinlas, Scotland. — *"Or slip between the bridges."*

(10620) — *"Chattering over stony ways."*

(1794) — *"With many a curve."*

511 At Oxford, England. — *"I steal by lawns and grassy plots."*

536 Fairy Glen, Bettws-y-Coed, Wales. — *"But I flow on forever."*

"Crossing the Bar."

(1811) Sunset on Lake Geneva. — *"Sunset and evening star."*

WILLIAM MAKEPEACE THACKERAY—1811.

(3087) Where Joshua bid the moon stand still. — *"King Canute."*

62 Looking out on the boisterous waves of the Atlantic. — *"But the sullen ocean answered with a louder, deeper roar;*

And the rapid waves drew nearer, falling, sounding o'er the shore."

WILLIAM WORDSWORTH—1770.

530 "Dove Cottage," for years the home of Wordsworth, in poetic Grasmere, England.

(197) Wordsworth lodgings, Hawkeshead. (200) Church at Rydel.

(198) School at Hawkeshead.

"Daffodils."

(10430) A sea of white poppies like "A host of golden daffodils."

"My heart leaps up."

(622) Rainbow in sky.

"Lines composed a few miles above Tintern Abbey."

(205) Ruins of Tintern.

"Composed from Westminster Bridge."

(103) Westminster Bridge.

"To the Daisy."

84 In a daisy field in New Jersey.

"Bruges."

(1484) Cathedral at Bruges.

"In the Cathedral at Cologne."

(1229) Cathedral at Cologne.

*638 Cologne's Cathedral, town hall and bridge of boats, Germany.

"Upon banks of Rhine."

*635 Ehrenfels castle S.W. across the Rhine to Bingen, Germany.

"On approaching the Staubbach at Lauterbrunnen."

(1760) Staubbach.

AUTHORS OF NON-ENGLISH SPEAKING COUNTRIES

DANTE (ALIGHIERI)—1265.

*736 Florence and the Arno N.W. from San Miniato, Italy (showing bridge where he met Beatrice).

737 The Duomo, "The very great heart of Florence." (The work begun during Dante's lifetime.)

NOTE.—See the Underwood Travel Tour of Italy.

DEMOSTHENES—385 B. C.

*761 to *767 (5 are starred) Scenes in Athens, the city of Demosthenes.

(9280) The Pnyx.

NOTE.—See Underwood Travel Tour of Greece.

GOETHE (JOHANN WOLFGANG VON)—1749.

(10431) Room in Goethe's house. (10432) Schiller's house at Weimar.

(1382) At Frankfort (native city of Goethe), Germany.

NOTE.—See Underwood Travel Tour of Germany and Italy.

HEINE (HEINRICH)—1799.

"Lorelei."

636 Lorelei Rocks, where the siren lured boatmen to destruction—the Rhine, Germany.

"Spring Festival."

*602 Happy crowds celebrating the Vorfest (Spring Festival) in Jonkoping, Sweden.

HOMER—850 B. C.

(Date according to Herodotus.)

770 Agamemnon's council hall in the innermost corner of Argos, Mykenæ, Greece.

(9310) Gate of Lions, Mykenæ. (9311) Tomb of Agamemnon, Mykenæ. (9312) The Heræon.

(9314) Angos and the plain.

(9315) Walls of prehistoric palace, Mykenæ. (2408) Most famous Cyclopean building.

(9316) Gateway of wall-girt Tiryns.

NOTE.—For further illustrations of the writings of Homer and other Grecian authors, see the Underwood Travel Tour of Greece.

VICTOR HUGO—1802.

*656 The old City Island and the Seine S.E. from the Louvre, Paris.

*659 The old historical Cathedral—Notre Dame, Paris.

(1558) Interior Notre Dame.

NOTE.—Much other valuable material will be found in the Underwood Travel Tour of France.

HENRIK IBSEN—1828.

(607) Ibsen in home at Christiania.

SCHILLER (JOHANN CHRISTOF FRIEDRICH VON)—1759.

(10432) House at Weimar. (10431) Room in Goethe's house. (1309) Schiller statue, Berlin.

"Hero and Leander."

*631 The great Watzmann—on the Konig's See—Bavaria.

"Lulled lay the smooth and silent sea;
A mirror in translucent calm."

(11243) *"And darkness is thy solemn deep."*

SIENKIEWICZ (HENRYK)—1845.

"Quo Vadis."

*729 The Coliseum, Rome.

(1995) (1996) Interior Coliseum. (2023) Typical house of days of Petronius.

(2008) (2009) Along Appian Way. (2006) (2005) Cathedral dedicated to St. Paul.

NOTE.—For further material see Underwood Travel Tour of Italy.

SOCRATES—470 B. C.

*761 to *767 (5 are starred) Scenes in Athens, the city of Socrates.

NOTE.—For further illustrations, see the Underwood Travel Tour of Greece.

VERGIL (PUBLIUS VERGILIUS MARO)—70 B. C.

725 The Tiber and its island—Rome, the city of Vergil.
*726 Rome, the Eternal City, from St. Peter's dome east.
*728 The Roman Forum S.E. from the Capitol, Rome, Italy.
*729 The Coliseum at Rome.

NOTE.—See Underwood Travel Tour of Italy.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

MANUAL TRAINING

EDITED BY

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173 STEREOGRAPHS OR SLIDES WITH 176 REFERENCES TO THEM.

It must not be expected that any collection of stereographs or slides selected for general school use will give all the illustrative material needed by the teacher of manual training. It cannot furnish the usual illustrations of processes which are most essential. On the other hand, it can furnish much unusual material to supplement what the teacher should always have on hand in the workroom. In that respect this collection is of special value. It contains much material that is especially choice and very difficult to obtain in any other form.

The stereographs or slides selected have been roughly classified under three main heads:

I Fundamental Handicraft requiring, for the most part, only individual effort.

II Building Construction and Materials, including boats.

III Machinery and Metals.

It is not supposed that the stereographs listed below include all the material in the collection on these three subjects—much will be found under "Products and Industries," "Architecture," "Transportation," "Agriculture" and "Home Economics"—but it is believed that they contain what will be of greatest service to most teachers of manual training.

The order of the stereographs or slides in the lists under each sub-topic is merely suggestive. It is taken for granted that each teacher will wish to modify the order to suit his needs, yet it is believed that presenting them in the order given is far better than in the geographical order, and may be of real value when no other illustrative material is available.

The numbers used below refer to the serial numbers in the upper right hand corner of the stereographs and on the slides. The numbers starred are included in the special 600 series.

(NOTE.—For more extensive material on *Manual Training*, refer to our General Catalogue.—THE PUBLISHERS.)

I. FUNDAMENTAL HANDICRAFT

(a) ROPE MAKING

415 Natives making rope from the maguey plant in Mexico.

*355 Making rope from native hemp in the Philippine Islands.

*259 One of the many uses of rope—roping a yearling on the plains, Arizona.

*450 Another use of rope—water sellers of Barranquilla, Colombia, S. A..

(b) BASKETRY

*955 Baskets used for gathering millet in Japan.
*744 Baskets used for gathering lemons in Sicily.
*713 Swiss woman with a mountain basket.
*908 Carrying rice in baskets in Burma.
630 Baskets on barley field, Germany.
702 Swiss youth with a basket.
*956 Mountain baskets used by the Japanese.
*160 Baskets full of cotton in Georgia.
*782 Baskets used in Constantinople.
*973 Baskets used on the tea plantations of Japan.
*817 Coffee baskets in East Africa.
399 Sombreros in Mexico.
979 Woven umbrella hats used by the Koreans.
696 Basket top sledge in the Madeira Islands.
*169 Wheel chairs at Palm Beach, Florida.
350 Boats with roofs made of reeds, Manila, Philippine Islands.
*482 Straw boats on Lake Titicaca, Peru.

(c) SPINNING

*263 Hopi Indians carding, spinning and knitting wool in Arizona.
*667 A grandmother at her spinning wheel in France.

(d) WEAVING

*264 Hopi Indian weaving blanket in Arizona.
*416 Weaving matting in Mexico.
*887 Shawl weavers at their work in Cashmere, India.
*359 Weaving the famous pina cloth in the Philippine Islands.
*871 Arab weaving silk in Syria.

658 Making Gobelin tapestry, Paris, France.
*783 Weaving Persian rugs in Constantinople.
784 Persian rug design artists at work.
*464 Shawls worn by ice dealers of Quito, Ecuador.
*475 Shawls worn by water carriers in the mining country of Peru.
*463 Shawl worn by native in the Andes.
*461 Shawl worn by native traveler in the Andes.
*192 Shawls worn by some of the Indians of the United States.
*962 Floor matting in a Japanese home.

(e) POTTERY

*519 Porcelain clay pit, England.
*520 Grinding and mixing clay for porcelain in England.
*522 "Throwing" plates on a potter's wheel, Royal Porcelain Works, Worcester, England.
*521 Dipping plates in glaze preparatory to firing, Porcelain Works, Worcester, England.
523 Turning and trimming a cup on a lathe, Royal Porcelain Works, Worcester, England.
968 Japanese potter at his wheel.
*969 Decorating cloisonné ware in Kyoto, Japan.
413 Water vender in Mexico.
122 Modeling clay pots for molten glass, Tarentum, Pa.

(f) WOODEN IMPLEMENTS

*269 Bow and arrow in hand of Indian boy.
*990 Australian aboriginal huntsmen and warriors with their boomerangs.
769 Primitive yoke, Corinth, Greece.
*645 Yokes for carrying milk pails in Holland.
*974 Japanese flails.
*408 Mexican coffee sheller.
329 Mortars for shelling rice—Panama.

(g) METAL WORK

*860 A swordmaker of Damascus, Syria.
918 Native goldsmiths at work with crude tools, Kandy, Ceylon.
812 Strange dress of women in East Africa, who wear wire collars.

II. BUILDING CONSTRUCTION AND MATERIALS

(a) THATCHED DWELLINGS

*816 Village in East Africa.
*811 Thatched roofs in East Africa.
916 A floating home in Burma.
*348 A native home in Tutuila, Samoan Islands.
*356 A workingman's home in Ermita, Philippine Islands.
*412 Thatched house in Mexico.
*325 A village in Porto Rico.
*450 Thatched roofs in Barranquilla, Colombia, S. A.
*980 Constructing a building in Seoul, Korea.
*459 Stone building with thatched roof in Ecuador.
565 Thatched stone buildings in Ireland.
*526 Anne Hathaway's cottage at Shottery, England.
515 The quaint thatched cottages of Shanklin, Isle of Wight.

(b) DWELLINGS BUILT OF BAMBOO AND THE GROWING GRASSES

*934 Bamboo plantation in China.
*967 "Under the bamboo trees" in Japan.
*458 Native home, made of bamboo boards in Ecuador.
353 Use of bamboo in house construction in Philippine Islands.
*359 A bamboo building in Molo, Panay, Philippine Islands.

(c) BOATS

*824 "Dugout" canoes on the Congo River in Africa.
*331 Indian "dugouts" on the Chagres River, Panama.
*316 Alaskan boats and village.
392 Esquimaux kayaks.
*444 Three types of boats on Lake Maracaibo, Venezuela.
374 Carrying canoe at the rapids on the Muskoka River, Canada.
*881 Date-palm boats in the Tigris River.
*880 Most curious and interesting boats on the Tigris River.
574 Old Viking ship, Christiania, Norway.
*61 Life-saving boats, Long Island, New York.
*187 "End-wheeler" on the Mississippi River.
*560 Building an ocean liner at Belfast, Ireland.
*672 The toy boat builder, Dieppe, France.

(d) LUMBERING

*964 Forest in Japan.
*294 A monster log in California.
295 Saw used in felling big trees in California.
*296 Splitting a log with dynamite in California.
*166 Hauling logs with oxen in Florida.
*297 Hauling big logs with mules in California.
914 Hauling logs in Burma.
*305 "Shooting" logs down a mountain side in Oregon.
300 Poling logs on a mill pond in California.
385 Logs in river in Alaska.
*304 Log raft containing millions of feet of timber, Columbia River, Oregon.
298 Train load of logs in California.
*299 Sawmill in the big tree district of California.
224 Scouring logs and hauling them up the slip into the sawmill, Minneapolis, Minn.
362 Primitive sawmill in the Philippine Islands.
*225 Seasoning lumber in the yards of Minneapolis, Minnesota.

446 Lumber yard in Venezuela.
907 Elephant laborers piling timber in Rangoon, Burma.

(e) TURPENTINE AND TAR

*149 Collecting turpentine in the pine forests of North Carolina.
*150 Sweating out the tar from the pine, North Carolina.
*151 A turpentine still in the pine forests of North Carolina.
*159 The greatest resin market in the world, Savannah, Georgia.

(f) WOODEN BUILDINGS

*262 Home of Navajo Indians, Arizona.
*618 Log house in Russia.
581 Hewn log house in Norway.
575 Houses made of hewn logs in Norway.
26 A New England home.

(g) QUARRYING

*28 Granite quarries in Concord, New Hampshire.
735 The world's finest marble quarries in Carrara, Italy.
*734 Hauling marble from the quarries in Carrara, Italy.

(h) STONE STRUCTURES

*577 Locks in canal in Norway.
*803 The great dam across the Nile at Assuan, Egypt.
*801 A Nilometer in Egypt.
*496 London Bridge.
497 Tower Bridge, London.
410 Ancient mosaics in Mexico.

(See Architecture for examples of stone buildings.)

III. MACHINERY AND METALS

(a) PRIMITIVE MECHANISMS

*797 The oldest of well-sweeps, lifting the Nile waters to the fields in Egypt.
*435 Crude method of grinding sugar-cane in Jamaica.
935 Chinese wheelbarrows.
*875 Irrigation on the Euphrates River in Mesopotamia.
965 A yama-kago (mountain chair), Japan.
*192 Indian papoose as carried on its mother's back.
919 A grinding machine in Ceylon.

(b) COPPER MINING AND SMELTING

*267 Loading surface ore, Metcalf Mines, Arizona.
268 Running out ore, Wilson Mine, Metcalf, Arizona.
*266 Inclines to copper mines, Metcalf, Arizona.
*265 Mountain railway to Morenci Copper Mines, Arizona.
*204 Shaft houses above the richest copper mine on earth, Calumet, Michigan.
205 Copper in bars and plates leaving the smelters of the Calumet and Hecla Mines, Michigan.

(c) IRON MINING AND THE MANUFACTURE OF STEEL

227 Open-pit iron mining with a five-ton steam shovel, Hibbing, Minnesota.
*229 Near view of five-ton steam shovel, Hibbing, Minnesota.
*228 Dumping ore into cars, open-pit mine, Minnesota.
*232 Iron miners at work in an underground "drift," Sellers' Mine, Hibbing, Minnesota.
230 Miners far down under ground in Sellers' Mine, Hibbing, Minnesota.
*231 Dragging cars of iron ore through subterranean passages to the shaft, Hibbing, Minnesota.
209 Gigantic crusher and spouts feeding it with iron ore from the mine, Escanaba, Michigan.

*233 Docks with two miles of frontage, holding 200,000 tons of iron ore, Two Harbors, Minnesota.

*203 Pockets of iron ore (160 tons each) on long dock ready for shipment, Escanaba, Michigan.

*234 Aboard a lake steamer loading with iron ore by chutes from gigantic docks, Duluth, Minnesota.

*196 Unloading iron ore from lake vessels—old and new methods—Cleveland, Ohio.

*198 Lowering a five-ton electric clam into the hold of an ore steamer at Cleveland, Ohio.

*199 Electric unloader lifting five tons of iron ore from vessel's hold to docks, Cleveland, Ohio.

*195 Piles of iron ore between docks of lake steamers and railways to mills, Cleveland, Ohio.

*119 Steel works, famous for gigantic furnaces, Homestead, Pa.

120 Red-hot iron flowing from blast furnace ready for making into pig-iron and steel, Pittsburg, Pa.

*121 Steel beam, red-hot, drawn out 90 feet long, steel works at Pittsburg, Pa.

*43 Steel framework in one of New York's greatest "sky-scrapers."

(d) BRIDGE CONSTRUCTION

*57 High bridge at Poughkeepsie, New York.

913 A railway bridge 1,000 feet high, North Burma.

678 The Viscaya Bridge across Nervion River, and its flying ferry, Bilbao, Spain.

*624 Bridge across ship canal connecting the Baltic and North Seas, near Kiel, Germany.

*542 The great Forth Bridge, Scotland.

*72 Bridge at Niagara Falls.

*31 On the Brooklyn Bridge.

*32 Brooklyn Bridge, from the World Building, New York City.

(e) SOME TRIUMPHS OF MECHANISM

*115 A great coal breaker and automatic slate picker, Pa.
*114 Picking slate in a great coal breaker.
*642 A Dutch windmill.
*376 A modern threshing machine at work in Manitoba, Canada.
*309 A modern American harvester at work, Walla Walla, Washington.
145 A fleet of battleships at Hampton Roads, Virginia.
*78 The electric power plant, Niagara Falls, New York.
53 Electric locomotive and train, New York.
*164 Automobiles on the world's finest race track in Florida.
*60 Curtis in his biplane, Long Island, New York.
144 The Wright aeroplane in flight at Fort Myer, Virginia.
*334 Compressed air drills at work in Panama Canal.
*336 Great locks and chambers in Panama Canal.
*338 Close view of the lock gates at Miraflores, Panama.

SCHOOLROOM DECORATIONS

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MYTHOLOGY

BY

EMILIE KIP BAKER,

AUTHOR OF "OUT OF THE NORTH LANDS"; "STORIES FROM NORTHERN MYTHS"; "POEMS FOR SCHOOL DAYS," ETC.

55 STEREOGRAPHS OR SLIDES OF THE 1,000 LIST WITH 68 REFERENCES TO THEM

ALSO 106 SUPPLEMENTAL STEREOGRAPHS OR SLIDES WITH 148 REFERENCES TO THEM

The student or reader who is unfamiliar with mythology, finds that the frequent allusion in literature to mythological subjects is apt to be a hindrance to the full enjoyment as well as the understanding of much of the best that lies in books. In art, too, there is an added pleasure to be derived from a knowledge of mythology, for most of the famous work in sculpture and architecture is a glorification of the Greek and Roman gods; and the subjects of many paintings are drawn from the same source. So it is part of every student's education to be familiar with the gods and heroes of ancient times; and it is hoped that by suggesting these old stories through the use of stereographs, an interest will be aroused in the subject of mythology.

The illustrations try to bring this ancient world closer to the modern reader by showing him the places associated with the heroic deeds of gods and men; where the famous siege of Troy took place; where Vulcan forged the thunder-bolts of Jupiter; and where Ulysses spent his years of wandering. Thus the legends of old Greece and Rome will be related to the world in which the reader lives, and when he sees the ruins of those famous temples where men sacrificed to the gods of Olympus, he may wish to learn more about those who lived "in the brave days of old."

The selection has been drawn from as wide a field of subjects as possible, and includes a considerable number of supplementary subjects in addition to the regular subjects from the World Visualized, but no attempt has been made at an exhaustive treatment or a close arrangement. The one object has been to illustrate some of the literary allusions which the student is likely to meet in his reading of ancient or modern literature. Most of the material is chosen with reference to Greek and Roman mythology, though some of the stereographs relate to Norse, Teutonic, and Oriental folk-lore.

Publishers' Note:

The numbers used in the following list—except those in parentheses—are the serial numbers found on the upper right-

hand corner of the stereographs and on the slides. The supplementary subjects are indicated by the larger numbers in parentheses ( ), these numbers being from the general catalogue.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

GRECIAN AND ROMAN MYTHOLOGY

JUPITER (ZEUS)

Jupiter was the greatest of the gods. He ruled over all the world from his throne on high Olympus. He is represented in statues as seated on a throne with a scepter in one hand and a thunderbolt in the other. Jupiter's father Saturn was bent on devouring all his children; but through the strategy of Rhea, Jupiter was saved and was concealed on the island of Crete.

(11809) View in Crete. Here Jupiter was cared for by the Nymphs, and fed by a goat.

*776 Mt. Olympus. This was the home of the gods—the place where Jupiter established his sovereignty after waging successful war with the Titans. Jupiter desired a cup-bearer to serve in place of the disgraced Hebe, so he changed himself into an eagle and carried off the beautiful Ganymede, son of the king of Troy. He kept the youth on Mt. Olympus to serve at the feasts of the gods.

(11791) (11805) Troy, the birthplace of Ganymede. The walls of Troy were built by Neptune in punishment for his attempt to dethrone Jupiter.

*766 Temple of Jupiter at Athens.

*767 (9335) Temple of Jupiter, Olympia. Inside this temple was the famous statue of ivory and gold that was considered one of the seven wonders of the world.

(9337) Stadium where the Olympic games were held every five years in honor of Jupiter. The Greeks reckoned time by Olympiads.

(9308) Temple of Zeus at Corinth.

(11248) How the plains of Greece may have looked to Deucalion and Pyrrha after the subsiding of the flood.

(8585) A Greek theater such as those where the games in honor of the gods were held.

(11557) The Wolf—suggests the story of Lycaon and his punishment.

(2015) The *Farnese Bull.*
Antiope, beloved by Jupiter, was ill-treated by Dirce, who was therefore condemned to be tied by her hair to a bull and dragged to death.

(7388) The Three Graces.
They were daughters of Jupiter, and presided over dancing and social pleasures.

(9336) Marbles from the west pediment, Temples of Zeus, at Olympia.

JUNO (HERA)

Juno was the sister and wife of Jupiter. She was the patroness of marriage, and many festivals were held in her honor.

(770) Mycenæ—one of Juno's favorite cities.

(622) Rainbow in the spray.

Juno chose as her messenger the maiden Iris, who is some-

times represented as a rainbow; sometimes the rainbow is merely the road over which she travels.

(11553) (11560) Views of bears—suggest how Juno turned Callisto and her son Arcas into bears. They were afterwards set in the sky as the constellations of the great and little bear.

(9334) Temple of Hera near Mycenæ.

(2460) Volo; near this is the stream across which Jason carried Juno in the form of a helpless old woman, without knowing that it was the goddess.

(8583) Ruins of Temple of Juno in Girgenti.

MERCURY (HERMES)

Mercury was the messenger of the gods, and he also conducted the souls of the dead to Hades. To enable him to travel swiftly, the gods gave him a winged cap and a pair of winged sandals. He also carried a wand—the caduceus—the gift of Apollo.

(2424) The famous statue of Hermes by Praxiteles.

(9334) Heræon, Olympia, where the statue was found.

(2394) Statue of the winged messenger.

(499) Picture of an Irish maiden and her harp—suggests the story of the invention of the lyre by Mercury, who, when only a day old, took a tortoise-shell and stretched strings across it. This lyre he afterwards gave to Apollo in exchange for the sun-god's cattle which Mercury had stolen.

MINERVA (ATHENA)

The goddess of wisdom who sprang full-grown and fully armed for battle from the head of Jupiter.

*761, 762, *764 Athens—both Neptune and Minerva contended for the right to name the city, and the honor was given to Minerva.

845 The olive tree—in the contest, Neptune offered a beautiful horse to the city, but Minerva gave the olive branch of peace.

(9348) Olive grove near Delphi.

762, *764, *765 (9283) (9284) The Parthenon—Temple of Minerva.

(395) Victory of Athena in the Pediment of the Parthenon. This famous temple was dedicated to Minerva.

(9295) Statue of Athena in the Parthenon. This gold and ivory statue was the work of Phidias.

*764 The Acropolis, on which stood the Parthenon.

0190) (10133) Owl—one of the favorite birds of Minerva.

*871 A Syrian weaving scene, showing a primitive loom such as the maiden Arachne may have used when she contended with Minerva and was punished for her arrogance by being turned into a spider.

761 Athens, old and new.

*764 The Acropolis.

(9323) Temple of Minerva at Alea.

(2445) Fountain of Pyrene, where Bellerophon caught the winged horse, Pegasus, by aid of Athene.

DIANA (ARTEMIS)

Diana was the daughter of Jupiter and Latona, and the sister of Apollo. She was a famous huntress, and was goddess of the moon as well. In art she is represented as dressed for hunting, with a bow in her hand and a hind at her side.

(10666) Statue, the Diana of Versailles, in the Louvre. Also called the "Diana of the Hind."

(9342) (9343) Thebes, where Niobe lived, whose daugh-

ters Diana shot to death because her mother, Latona, had been scorned by Niobe.

(2141) Statue of Niobe protecting her child from the arrows of Diana.

(8592) Spring of the nymph Arethusa. She was one of Diana's nymphs, and was turned into a fountain by the goddess so that she might escape from the river-god Alpheus.

(11808) Ruins of the temple of Diana at Syracuse.

(10989) Ephesus—where there was the most famous temple of Diana. It was one of the seven wonders of the world.

(11366) Site of Diana's temple.

NEPTUNE (POSEIDON)

Neptune is represented in art as driving a chariot drawn by huge sea-horses. He held a trident in his hand and was accompanied by the Tritons who were half fish and half human.

Neptune was the brother of Jupiter and Pluto, and to him was given the empire of the sea.

(2393) Colossal Poseidon.

(2395) Neptune, god of the sea. The most famous children of Neptune were Triton and Proteus.

*987 Horses, beautiful as the one produced by Neptune in his contest with Athena over the right to name the city of Athens.

(2389) Triton in the Acropolis museum. He was the son of Neptune, and the trumpeter of the ocean. By blowing on his shell he could raise storms or allay them.

(11791) (11805) Troy. Neptune, being condemned to serve the king of Troy, built the city walls with

the help of Apollo, through the magic of whose playing the stones fell into their places.

(9302) Temple of Neptune, where votive offerings were made. Sailors hung on the walls of the temple the spoils of victories at sea or treasures saved from shipwrecks. See also 62, 353, 485, *595.

(1882) Laocoön—in the Vatican at Rome. This portrays the tragedy of Laocoön and his sons. Laocoön was a priest of Neptune.

*286 What the sea-birds are looking for. Suggests the story of the Halcyon birds which built their nests on the crest of the waves.

*656 River Seine—Each river had its own particular river-god; but they were all under the dominion of Neptune.

APOLLO (PHOEBUS)

Apollo was the son of Jupiter and Latona. He was the god of the sun, and also the god of music. In art he is represented as a handsome youth crowned with laurel and holding a lyre or a bow.

(10663) *Apollo.* (Uffizi Gallery.)

773 Delphi, situated on the slope of Mount Parnassus, where the most famous of the Grecian oracles—that of Apollo—was located. The Pythian games, held to celebrate Apollo's slaying of the Python, were celebrated every three years at Delphi.

(9350) (9352) Apollo's temple at Delphi.

*776 Thessaly. It was Admetus, king of Thessaly, whom Apollo served as a shepherd after he was banished from Olympus on account of his defiance of Jupiter.

(2466) The river Peneus flows through Thessaly. Peneus was a river-god, and his daughter Daphne was

loved by Apollo. To help her escape from Apollo, Peneus changed her into a laurel tree.

957, *977 Apollo went down into the heart of Mount Ætna to destroy the Cyclops who had forged the thunder-bolt with which Jupiter killed Apollo's son Æsculapius.

(9319) Tholos in the sanctuary of Æsculapius.

(10663) Statue of Apollo with laurel crown, suggests the story of how the laurel became the crown of poets.

(2438) The Bassæ temple of Apollo.

(2426) A Greek shepherd. In some disguise like this Apollo tended the flocks of Admetus on the plains of Thessaly.

(2457) (9348) Mount Parnassus, on whose slopes was the sacred oracle of Delphi. In the caves of Mount Parnassus lived the python which Apollo slew with his arrows.

773 Where Apollo slew the python.

(2466) Vale of Tempe—one of the favorite haunts of Apollo. It was from this spot that he transferred the laurel to Delphi.

(9342) (9343) Thebes. Here Niobe lived with her fourteen beautiful children. She offended Latona, the mother of Apollo and Diana, by boasting of her children, so Latona sent Apollo and Diana to kill the children of Niobe.

(2141) Statue of Niobe protecting her child. Niobe was turned into stone by the gods who pitied her sorrow.

(9331) Messene—The Arcadian Gate of old times. The maiden Marpessa, as she was escaping with her lover Idas was stopped in Messene by Apollo, who desired her love. She wisely refused him and chose the shepherd Idas.

(8574) (8573) Ruins of the Greek temple to Hercules and Apollo, Sicily.

(1981) View in the gallery of the statues, Vatican, showing the Discobolus. This suggests the origin of the ancient game of quoits. In connection with this is the story of Apollo and Hyacinthus.

*876 The flood-plain of the Euphrates, suggesting the scene where Apollo slew the python with his golden arrows. The python was born of the slime that settled on the land after the flood.

812 Showing negroes in Africa. This suggests the tales of the origin of the black men; how Phaeton, son of Apollo, insisted upon driving the sun chariot. He lost control of the horses, and the chariot came so near the earth that the people who lived in that part of the world were burned black.

*395 Land of the midnight sun, where lived the Hyperboreans, among whom Apollo spent a year shortly after his birth.

(9352) Sacred Omphalos from the temple of Apollo.

(9306) Ruins at Corinth—with temple of Apollo.

(2451) The highest peak of Mt. Parnassus.

(1571) The "Fighting Hero," Hall of Melpomene. Melpomene was the Muse of Tragedy. Apollo was leader of the Muses.

HERCULES

(7398) Statue of Hercules—the famous Farnese Hercules in the museum at Naples.

(9316) Cyclopean gate-way of "wall-girt Tiryns," where Hercules was brought up. This suggests the story of the twelve labors of Hercules.

(6759) African lion, such as Hercules slew in the Nemean forest.

(9315) Tiryns, where Hercules was brought up.

*692 Gibraltar—The Pillars of Hercules. Some authorities say that Hercules raised the mountains; others relate that he split the mountain in two. The hero was on his way to capture the oxen of Geryon.

(8573) Ruins of Temple of Hercules and Apollo.

(1967) Mount Aventine, where the giant Cacus hid the oxen in his cave, having stolen them from Hercules.

(9308) Nemea—where Hercules killed the Nemean lion.

(2460) Mount Pelion. Near the summit of this mountain lived the famous centaur Chiron, to whose care Hercules was intrusted when a child.

*301 Crater Lake. Hercules was sent to kill the birds that hovered over lake Stymphalus—a crater lake. The mists that rose from the lake were very deadly.

CERES AND PROSERPINA

Ceres was the goddess of agriculture, and Proserpina was her daughter who was carried off by Pluto to Hades. In art, Ceres is represented as crowned with ears of corn and flowers. She holds a sickle in one hand, and a sheaf of wheat in the other.

(9298) Eleusis. Here was built a beautiful temple to Ceres in memory of her visit to this city.

(9298) The Initiation Hall of Mysteries at Eleusis, where sacred rites, instituted by Ceres, were celebrated.

(8598) Papyrus-bordered Spring of Cyane—the nymph who tried to save Proserpina from Pluto.

*744 A lemon grove in Sicily. There were many sacred groves in Sicily and Greece.

Ceres visited a terrible punishment on Erysichthon for daring to cut down a tree in her grove.

(9295) Relief from the Temple of Ceres at Eleusis.

(10190) The owl—The unfortunate man who told of Proserpina's eating the pomegranate-seed while in Hades was changed by the wrathful Ceres into an owl.

BACCHUS (DIONYSUS)

Bacchus was the god of wine and revelry. He was intrusted to the care of the nymphs in his infancy, and later became the pupil of the satyr Silenus.

(10666) View in Louvre showing Bacchus against wall and Diana in foreground.

(11806) Figure of Silenus, the tutor of Bacchus, in the theater of Dionysus.

(9290) Theater of Dionysus.

(9291) Seat for the priest of Dionysus—theater of Dionysus.

(9342) Thebes, where Semele, the mother of Bacchus, lived.

(2424) Statue of satyr holding the infant Bacchus (Museum Naples).

(2014) Bacchus traveled through the country with his attendant nymphs and satyrs, and taught the people the art of wine-making.

(10112) Bats—These suggest the story of the daughters of King Minyas, who were turned into bats in punishment for neglecting the rites of Bacchus.

(2143) Bacchus and Ampelus (Uffizi Gallery).

(2139) The Dancing Faun.

(8588) The ear of Dionysus—famous cavern near Syracuse.

THE CYCLOPS

The Cyclops were the children of Uranus (Heaven) and Gaea (Earth). Homer describes them as a gigantic race of shepherds. Each had a single eye in the middle of his forehead. The Cyclops helped to forge the thunder-bolts of Jupiter, and after conspiring against him were condemned to dwell in Tartarus. The most famous of the Cyclops was Polyphemus, about whom there are many stories.

746 Mount Ætna, the chimney of Vulcan's workshop where he directed the work of the Cyclops. The mountain was supposed to lie on the head of the giant Typhon, who caused volcanic eruptions by spitting forth burning rocks and flames. Some of the Cyclops were released and allowed to live on the islands in the Mediterranean.

***301 Crater Lake in an extinct volcano.**

Compare with this picture:

***403 Popocatapetl.**
465 Pichincha.
***956, 957 Fujiyama.**
976, *977 Aso-San.

VENUS (APHRODITE)

Venus was the goddess of love and beauty. In art she is represented as a beautiful nude figure. Sometimes she is pictured as seated in a chariot drawn by doves.

62 View of the sea—suggests the myth of Venus that she was born of the foam of the sea.

(2014) Venus of Gallipede.
(10664) Venus of Capua (Naples Museum).
(2138) Venus—by Canova (Pitti Palace).
(10665) Venus Genetrix (Uffizi).
(2048) Venus de Medici.
(1572) Venus de Milo (Louvre).
(11805) Troy—which suggests the story of the judgment of Paris. Paris was the son of the king of Troy, and he was chosen as judge in the contest for the golden apple. By awarding the prize to Venus the events were begun which ended in the Trojan war.
(2047) Room in the Uffizi Palace containing the Venus de Medici.

NIOBE

(9342) Thebes, where Niobe was queen and where her fourteen children were shot by Apollo and Diana with their golden arrows. She was turned to stone by the gods who pitied her grief.
(2141) Statue of Niobe in Pitti Palace, Florence (Praxiteles).

AGAMEMNON

770 Agamemnon's Council Hall, Mykenæ. Agamemnon was leader of the Greeks in the Trojan War.
(9311) Tomb of Agamemnon.
(9312) Argos, near which Orestes avenged his father Agamemnon's death by slaying his faithless mother Clytemnestra.
(11805) Site of Troy. Here raged the Trojan War in which Hector, Achilles, Priam, Paris and Agamemnon fought.
(9312) Heræon, where the Greek chiefs swore fealty to Agamemnon when he was setting out for Troy.

PARIS (Son of King Priam of Troy)

(11810) Statue of Paris in Athens suggests the story of the judgment of Paris. and the awarding of the golden apple to Venus which started the chain of events that resulted in the Trojan War.

*771 Site of ancient Sparta.

772 Langada Gorge—Sparta's war path to the west.

(10811) Walls of Troy—around these walls the great battles of the Trojan War took place and on the walls stood Helen of Sparta watching the battle.

(11805) Center of Troy, where these ruins now lie, stood the palaces of the Trojan princes.

ULYSSES

745 Modern Syracuse, Sicily, where Ulysses came in his wanderings.

*747 From Charybdis to Scylla—a danger passed by Ulysses in his wanderings.

PERSEUS OF ARGO

(9313) Argos, place of many traditions. Perseus was born here, with whom is associated the slaying of the Gorgon Medusa.

(11804) The Loggia of Florence showing statue of Perseus holding up the severed head of Medusa.

(9314) Larissa, Argos, where Perseus killed his grandfather Acrisius, unintentionally, according to prophecy.

(9315) Tiryns, where he ruled.

JASON, THE ARGONAUTS AND THE SEARCH FOR THE GOLDEN FLEECE

(9319) Tholos, in Temple of Æsculapius, god of healing. Æsculapius accompanied the Argonauts in their expedition to Colchis. He was destroyed by

Jupiter at the instigation of Pluto, who was jealous of his power of healing.

780 View of the Bosphorus from Asiatic side. Through this strait Jason sailed in the ship Argo in search of the Golden Fleece.

*781 View over the Bosphorus from the European side. Jason passed here on his way to Colchis.

(2460) Volo (Iolcus) Harbor from which Jason sailed in quest of the Golden Fleece.

(2460) Mt. Pelion. The ship Argo was built of trees cut on Mt. Pelion.

PEGASUS

The famous winged horse Pegasus, which was captured by Bellerophon, sprang from the drops of blood that fell from the Gorgon Medusa when Perseus cut off its head.

(2445) The fountain of Pirene, where Bellerophon caught Pegasus, with the help of the golden bridle given him by Minerva.

(9406) Old Corinth. Bellerophon was a grandson of Sisyphus, king of Corinth.

THESEUS

Son of King Ægeus of Athens

*761 Athens, where old King Ægeus watched to see his son Theseus returning with white sails from slaying the Minotaur. On seeing the black ship he flung himself into the sea and the sea was called by his name after that.

*768 Plain of Marathon, where Theseus and Pirithous became friends.

(11809) Crete, where Minas was king and where Theseus slayed the Minotaur, which was kept in the labyrinth constructed by Dædalus.

CASTOR AND POLLUX

(8584) The Temple of Castor and Pollux. The brothers were permitted by Jupiter, after the death of the mortal Castor, to form the constellation Gemini—the Twins.

*771 Site of Sparta, with which is associated Castor and Pollux.

THE TROJAN WAR

Caused by the carrying off of Helen, wife of the King of Sparta, by Paris, son of the King of Troy.

(11805) (11791) Views of ancient Troy, where the Trojan war raged and where Hector, Achilles, Priam, Paris and Agamemnon fought.

(1571) The Fighting Hero—Hall of Melpomene.

(2043) The Rape of Polyxena, in the Loggia at Florence.

ŒDIPUS

(11807) (9352) Winged sphinx, Delphi Museum. Like the one who propounded the riddle to Œdipus.

(9343) Thebes and the road Œdipus took with blinded eyes when he went out of the city.

(9342) Thebes.

*795 Sphinx at Gizeh, Egypt.

(9306) Old Corinth, where Œdipus spent his youth.

EUROPA

(The fair daughter of King Agenor of Phœnicia)

(11809) Crete, where she was borne by Jupiter.

PAN

God of the flocks and herds. He lived sometimes in the mountains and sometimes in the valleys, where he loved to dance with the nymphs. He is represented with pointed ears, and having the legs and horns of a goat.

(9322) Wall of Mantinea and mountain range beyond which was the home of Pan and the Arcadian shepherds.

(2466) Vale of Tempe, such a spot as Pan often chose for his sports. Read the story of Pan and Syrinx, which tells of the invention of the reed pipe by Pan.

PIGMIES

826 View of pigmies of the Congo.

(11562) Cranes like those that were wont, in the days of Homer, to emigrate in winter to the pigmies' country, near the source of the Nile and devastate the cornfields of the little folk.

VESTA, GODDESS OF THE HEARTH

725 Temple of Vesta, sacred to Vesta, Goddess of the Hearth, where Rhea Silvia, mother of Romulus and Remus, tended the sacred fire. The temple of Vesta was situated on the southern side of the Forum and may be located in the view.

ROMULUS AND REMUS

725 Temple of Vesta, where Rhea Silvia, the mother of Romulus and Remus, tended the sacred fire. In punishment for breaking her vows she was condemned to be buried alive.

725 The Tiber, into which Romulus and Remus were thrown by Amulius.

(11557) The wolf. Romulus and Remus were nurtured by a she-wolf.
*726 Rome, city founded by Romulus.
*728 The Forum.
(1966) The capitol.

THE INVENTION OF THE SAW

(4507) A saw mill in Korea. Perdix, the nephew of Dædalus, invented the saw, in imitation of the backbone of a fish, much to the anger of Dædalus, his teacher.

PSYCHE

(11563) Stages of the butterfly, which was a lovely symbol of Psyche, beloved of Eros (Cupid).

ARETHUSA

(One of the most beautiful of Diana's nymphs)

(8592) Spring of Arethusa. She was changed into a fountain by Diana to escape the river God Alpheus.
148 Luray Caverns, Va. Suggests the way in which the river Alpheus disappeared and continued its course underground to appear again in Sicily.

NIKE

(The Goddess of Victory)

763 Temple of Nike, Athens.
(1573) Statue of Winged Victory (Louvre).

NORSE, TEUTONIC, CELTIC MYTHOLOGY

From Iceland came the Eddas and Sagas of Norse mythology. Thor, Odin, Baldur, the Valkyries, Freya, Loki, all had their birth in the imag-

ination of skalds (bards) of Iceland. All the runic lore of Denmark, Norway, Sweden, even Teutonic mythology (Nibelungenlied, for example), can be traced to a source in the land of "frost and fire."

*590 Kjendal glacier, Norway.
*585 Naerofjord, Norway.
588 Rustoen Falls, Rustoefjeld, Norway.
603 Toppo Falls, Trollhattan.
*576 Rjukanfos, "foaming fall."
*586 Grytereids Glacier, Norway.

These, though not in Iceland, suggest the natural scenery in which took place the deeds of Northern gods and heroes.

636 Lorelei Rocks in the Rhine.
(1235) Drachenfels (Dragon's Rock). On a cave below the castle once lived the Dragon which was slain by Siegfried, hero of the Nibenlungenlied.

THE LEGEND OF ST. URSULA

*638 Cologne, where, according to Christian legend, St. Ursula and 11,000 virgins were put to death by an army of Huns. St. Ursula is identified with the Swabian goddess Horsel (Ursel), the Holda or Venus of Teutonic mythology.

A LEGEND OF KING ARTHUR

(7460) The Castle, Edinburgh, Scotland, built on the ridge of rock called "Arthur's Seat." See story of *Le Morte d'Arthur.*

THE DRUIDS

(178) Stonehenge, Salisbury Plain, England, most celebrated of Druid circles. The Druids stood to Celtic tribes in the same relation that the Brah-

man did to India, the Magi to Persia, and Priests to Egypt. Here in May was celebrated the great festival of Beltane—"fire of God"—a trace of which is to be found in the name given to Whitsunday in parts of Scotland even to-day. Sir Walter Scott refers to it in the Boat Song in the "Lady of the Lake."

(7510) Fingal's Cave, haunt of Druids.

(9603) Prehistoric monuments of Carnac, France—built by the Druids.

(387) The great suspension bridge which leads over Menai Strait, North Wales, to Anglesey. To this island the Druids were driven by the Roman invasion. The Eisteddfodds of Wales are successors to the sessions of bards and minstrels which the Druidical priesthood kept up in Wales long after their mystic religion was extinct elsewhere.

EGYPTIAN, BABYLONIAN, PHŒNICIAN, HEBRAIC, HINDU MYTHOLOGY

(11316) Rosetta Stone, which has revealed some of the secrets of Egyptian antiquity and gives the key to the religious beliefs of early Egyptians.

(9133) Temple of Siva, Elephanta, the god of destruction.

THE SUN GOD

*795 Great sphinx of Gizeh—the most ancient statue known—the personification of an Egyptian Sun God.

856 Temple of Baal at Baalbek, Syria—temple of the Phœnician Sun God.

BUDDHA
God of preservation
Incarnation of Vishnu

909 Statue of Buddha.

JUGGERNAUT

(3508) Temple where the idol is kept.
(3618) Car of Juggernaut in which the image of Juggernaut rides.

A CHRISTIAN MYTH

*874 The traditional "Garden of Eden," Euphrates Valley, where one of the early myths of creation centers.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

NATURE STUDY

BY

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387 STEREOGRAPHS OR SLIDES WITH 799 REFERENCES TO THEM.

These travel studies through the stereoscope (and in lantern slides) have been selected because of their marked value in an elementary study of nature. This is not a repetition of any other classification, though naturally most of the subjects used are also used elsewhere, as under the head of Zone Life, Animals, Botany and Physical Geography. And those who desire a fuller treatment of the subject will find plenty of additional material under those classifications.

In general, the value of this list in nature study will be to extend the very limited observations possible in most regions. Thus the pupil will begin his study with the materials he has immediately at hand—the animals of the farm, the crops of his own locality, the physiographic features of

his home. Then he will be appreciative of similar things elsewhere—the relatives of these familiar farm animals that in other lands are used for like purposes. He may compare them by the stereographs or slides in matters of habits, care, structure, etc. The child of the inland town, whose notion of wave action must be limited to his observations on the shore of his little pond, may see in the stereographs such action on the ocean shore. It should be understood that it is not the intention that these stereographs will take the place of a careful study of the local environment, but they will supplement this.

They will stimulate it, too. Often we see in a picture first and appreciate there what has passed unnoticed in our everyday surroundings for years. Thus the child who sees the cutting action of a stream in such stereographs as 76 and 223, or who notes the deposit at the mouth in 80 and 586, will go to the study of his own local creek with renewed zest and added interest.

But the stereograph is more than a mere picture, giving as it does the object set out in real space as in nature. Stereographs, therefore, serve in a peculiar way to widen the child's environment and to enrich his personal experience.

The subject matter is here treated under three main headings, "Animal Life," "Plant Life" and "Physical Phenomena."

Publishers' Note.

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations for *Nature Study* the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

ANIMAL LIFE

THE MAMMALS

Ass, 800.
Bear, 239.
Beasts of Burden. See Ass, Bullock, Burro, Camel, Caraboa, Dog, Donkey, Elephant, Horse, Llama, Mule, Ox, Water Buffalo.
Beaver, 51.
Buffalo, *238.
" (water), *357, *363, 914.
Bullocks, *883, 905, 914.
Burro. See Donkey.
Camel, 788, *789, 790, *795, *842, 845, 848, *859, 902, *938.
Caraboa, *358.
Cat, *56.
Cattle, Beef type, 217, 664.
Milch type, *86, *569, *585, *642, *679, 757, *895.
Deer, 191, *582, *593.
Dog, *10, *56, *108, *294, *442, 516, *543, *562, *593, *642, 643, *704, 715, *760.
Donkey, 275, *403, *404, *450, *461, *569, 790, 882.
Elephant, *904, 907, 923, *924, 925.
Farm Animals. See Camel, Cattle, Dog, Goat, Hog, Horse, Sheep, Water Buffalo.

Giraffe, 819.
Goat, 575, *586, *743.
Hippopotamus, 820.
Hogs, *218.
Horse, Carriage type, 26, 84, *584.
Draft, *216, *987.
Saddle, *259, *411, *676, 872.
Pack, 477, 867, 890.
Kangaroo, 984.
Llama, *473, 477.
Monkey, 827.
Mule, *181, *273, *442.
Ox, *149, *166, 172, 326, *430, *734, 845.
Reindeer, *582, *593.
Seal, 50, *287.
Sheep, *201, *483, *543, *831, 991.
Swine. See Hog.
Tiger, 896.
Water Buffalo, *357, *363, 914.
Whale, *63, 64, 397.
Zebra, 810.

SUGGESTED USE

The home animals need, first of all, to be observed and carefully studied. Then the stereographs may serve to supplement this study. Thus the cat is seen to be a warmth-loving creature. She loves to lie stretched out before the fire and curls up to sleep in the warmest corners. She goes out regretfully in winter and then gingerly treads the snowy paths. Such facts the children readily discover. Now see the old tiger, 896. He comes (as you would expect from pussy's preferences) from a

hot country, as do nearly all the great cats. The cat does not chase her prey, the pupils will observe, as the dog does, but creeps up stealthily and then pounces upon it with a few powerful leaps. So, too, the tiger hunts. Throw the cat a bone when she is brought to school to serve as subject for the lesson and, in all probability, she will pick it up and slink off to a dark corner to eat it. She gnaws it leisurely, licking it, and leaves it if you bother her. Not so the dog. He crunches it on the spot, growling at any threatened interruption, and swallows his meal hastily in gulps. Like the cat, the tiger is a solitary hunter, eating his quarry in some secluded jungle lair. How like the cat in attitude, habits and structure he is.

So we may study the cattle of the pasture lot, and then their foreign relations by the stereograph, the familiar horse in comparison with the zebra, the muskrat of the nearby swamp and the beaver, 51 and 52, that is kin of his. For detailed suggestions on the beasts of burden see the sample lesson on Nature Study.

BIRDS

Auk, *394.
Chicken, *343, 448.
Gannets, *368.
Geese, *569.
Goldfinch, 534.
Ostrich, *283.
Pelican, *165.
Pigeon, *2.
Seagulls, *286.
Thrush, 533.
Waxwing, *107.
Birds' Nests, *165, *283, *368, 533, 534.

REPTILES
Alligator, 163.
Snakes, 894.

FISH
Salmon, *307, 308.

INSECTS
Silkworm and moth, *864, *865, *866, 867, 868, *869, *870.

ANIMAL PRODUCTS MAN USES
Blubber, *63.
Ivory, *904, 907, 923, *924.
Leather, *15.
Milk, *86, *679, *743.
Skins as clothing, *395.
Silk, *864, *865, *866, 867, 868, *869, *870.
Whalebone, 64.
Wool, 17.

OFFENSIVE AND DEFENSIVE STRUCTURES
Fangs, 894.
Hair, *238.
Horns, 191, *238, 240, *358, 544, *582.
Hoofs, 191, *218, *357, *358, *363, 810.
Spurs, 448.
Trunk, 907, 923.
Tusks, *904, 923, *924.
Teeth, 163.

SUGGESTED USE

It is worth noting that these structures of offense and defense are developed most frequently in the male. It is the bull buffalo that has the shaggy mane to protect his vital parts from the ripping horns of his antagonist. The buck deer is horned, the doe hornless. The cock has the spurs, the bull elephant the tusks. This equipment for fighting is accompanied in the male with a pugnacious disposition. The boy's proclivity to fight is a natural inheritance. Observe, however, that among the animals these organs that serve for the fight are used largely in the defense of the unprotected females

and young. The fighting qualities of the boy need, not suppression, but direction along the natural lines. We need fighters as long as the weak are oppressed, the immature are exploited.

PLANT LIFE

Blossoms, *182, *281, 372, *543, 565, *570, *716, 877, 879, *956, *982.

Details of the flower, *168, 533, 534.
Cherry blossoms *961, clover 544, daisies 84, orange *281, roses *279, 511, *549.
Fruit forming from the flower, *168.

Seeds.

Cacao, 418, *457.
Coffee, *817.
Cocoanuts, *167, *168.
Cotton seed, 161, *177.
Dandelion, *366.

Details of leaf, 328, *419, *420, *431, 552, *816, *858.
Roots, *293, *897, *929, *964.
Grasses, *10, 11, *182, 239, *380, 402, 544, *642, 954, *956.
Sedges, 152, *182, *553, 877.
Rushes, 152, 163.
Vines, 310, 515, 516, *526, 825, 998.

Trees.

Arbor vitæ, *49, *108, 202.
Balsam, *593.
Bamboo, *934, *967.
Banana, *331, *344, *417, *434.
Breadfruit, *420.
Box, 515, *526.
Cacao, 418, *419.
Canary, 998.
Cedar, red, *107.
  white, see arbor vitæ.
Cedars of Lebanon, 872.
Citron, 433.
Cryptomeria, *964.
Cypress, *761.
Elm, American, *2, 26.
  English, *507.
Lebbek, *789.
Lemon, *744.
Locust, 9.
Magnolias, *282.
Mango, 401.
Maple, *49, *128, *524.
Mulberry, *864, 867.
Cork oak, *681.
Osage orange, 217.
Orange, *279, *280, *281.
Palm, 163, 328, 429, *818, 841.
  Cocoanut palm, *167, *168, 324, *343.
  Date palm, *686.
Pine, 8, *149, *166, *381, 382, *383, *384.
  Norway pine, *223.
  Pinon, 275.
  Scrub (Banksiana), 373.
  Southern, *149.

Sugar, 298.
White, 11.
Poplar, large tooth, 202.
Lombardy, 511, 664.
Trembling, *282, *576.
Rubber, *411.
Sequoia, *293, *294, 295, *296, *297.
Spruce, 8, 372, *381, 382, *383, *384.
Yucca, *404.
Willow, *365.

Forestry.

Dead stuff in forests, *149, 239, 374, *384.
Denuded slopes unforested, *28.
Fire in forests, 374.
Forest floor clear under pines, *149.
Forest products,
Lumber, *225.
Turpentine, *149.
Wood pulp, *219.
Lumbering operations, *166, *225, *294, 295, *296, *297, 298, *299, 300, 385, 907.
Wasteful methods, *296, *297.
Timber line, 382.
Tree, hollow; still living, *293.
Showing buttresses, *293.
Showing form in the open, 26, *128, 372.
Showing form in the forest, 382, *383, *384, *609.
Showing lines of growth, 260, *294, 295, 298.
Showing self-pruning, 239.
Trees, stunted by *drought*, *270.
Cut back because of *insects*, *2.
Loaded with *snow*, *79.
Bent by *wind*, 479.
Stunted by *wind*, *274, 275.

The spore-bearing plants.

Ferns, *343, 536, 564.
Mosses, 536, *582, 583, *593, 670.
Lichens, *80, 202, 290, 373, *518, 536, *582, 583, 670, 825.
Sea weeds, 541, *672.
Under Bacteria, disseminators of disease, comparison can be made of sanitary living quarters, *330; and, in the same region, the unsanitary, *325, 448, *450. Note narrow streets, *730.

Plant Associations.

Plants of Dry Soil, *238, *270, *271, *403, *404, *768, *831.
Cactus association, 405, 848.
Desert types, 260, *273, 794.
  Oasis, 841, *842.
Response to hot sun, *855, 879.
Response to intense light, 65, 163.
Rock cliff association, 14, 65, *80, 290, 373, *562, 733, 759.
Ravine types, 872, 877.
Associations with abundant water supply.
  Typical water society, 373.
  Salt marsh, *668.
  Plentiful water and heat—the jungle type, *818, 825.

SUGGESTED USE

Study of these stereographs will help children see that the plants that are associated under certain conditions form a definite group. They will then be ready to go out to the plant societies of their own region to discover what plants live together. Go to the pond, for instance, and see what plants there are associated; to the river margin to look for the ones

that always grow under such conditions. Let them list the plants of their own ravines, of the prairies, the pine woods, the beech forest, etc. Then they may discover in the life histories of these plants and the associated animals or in their structures, the things that eminently fit them to such localities and conditions.

VEGETABLE PRODUCTS MAN USES

Bamboo, 353, *358.
Barley, 630.
Citron, 433.
Coal, *110, *111, *112, 113.
Corn, *193, *200.
Cocoa, 418, *419, *457.
Coffee, *407, *408, *417.
Cotton, *160, *177, *468.
Garlic, *743.
Grapes, *661, *691.
Hay, *527, *578, *609.
Hemp, *355, *361, *363.
Hops, 630, *992.
Jute, 406.
Linen, *557.
Maguey fiber, *404, 415.
Millet, *955.
Oats, *601.
Potatoes, 59.
Pulque, *404.
Rice, *181, *182, 183, *357, *886, *908, *920, *924, 933, *971, *972, *975.
Rope, *355, 415.
Rubber, *411, 455.
Sugar-cane, 429, *430, *435, *469, *470.
Tea, *973.
Tobacco, *431.
Thatch for roofs, *348, *356, *357, *358, *363, 515, 565.
Turpentine, *149, *151.
Wheat, *309, *376, *377, 674.

SUGGESTED USE

It would be an interesting and profitable exercise to make a list of all the vegetable products man uses that may be discovered in the home locality. As

many of these as possible might be then brought to school by various pupils for first-hand study. Thus coffee could readily be recognized as a sort of bean. Tea could be seen to be a dried leaf. Soft coal would likely disclose, by the bark fragments or possible leaf impressions in it, something of its nature. So other materials would show a part of their history. The stereographs would serve to make them more complete. The interest in the stereographs will be much greater and their instructiveness increased by this approach from a study of the objects themselves.

GARDENS, 141, 372, *428, *494, 515, *526, 643, *736, *858, *970.

ELEMENTARY AGRICULTURE

Kinds of soil

Alluvial soil, *193, 845, 933.
Clay, *519, 879.
Glacial drift, *200, *386, *593.
Peat, *567.
Prairie soil, *216.
Sand, *10, 11, *273, 793.
Volcanic ash as soil, *460, *469, *975.

Soil formation

Soilless land, *389.
Early stages of rock disintegration, *476, 480, *699, 872.
Crevice vegetation starting, 14, 65, *80, 290, 373, *562.
Showing how slowly disintegration proceeds, 260, 675, *792.
Later stages in soil formation, *283, *461.
See also "Destructive Agencies."

Fertilization, *661.
Plowing, modern, *216; primitive, with oxen, 845; with water buffalo, *357; with elephants, *924; with camels, 845.

Cultivation, *626, *975.
Irrigation, *182, *303, *469, *797, *798, *875, 933, *971.
Harvesting, 59, *160, *181, *182, 183, *200, *280, *309, 310, 324, *468, *470, *527, *578, *601, *609, 630, 674, *686, *691, *724, *817, *920, *973.
Threshing, 183, *376, *377; primitive, 671, *798.
Marketing, *331, *442, *642, 643, *679, *743, *760.
Various crops, see under Vegetable Products Man Uses.
Roads, *166, 275, *282, 326, *365, *461, *576, *584, *642, 643, *661, *734, *758, 772, *789, *876, *921, *938, *964, *967, *982.

PHYSICAL PHENOMENA

ROCKS OF VARIOUS SORTS

Basalt, *562, 563, 564.
Clay, *519.
Coal, *110, *111, *112, 113.
Granitic rocks, 14, 202, *291.
Limestone, 276, 536.
Marble, *734, 735.
Salt, *620, *668, 690.
Shale, 65.

Rock strata horizontal, 65, *110, 113, 382.
Rock strata inclined, *108, *570, 636, *699, 996.

DESTRUCTIVE AGENCIES

Earthquakes, *284, 285, 353, 748, *749.

Waves, 62, 353, 367, *476, *513, *518, 541, *570, *828.

Resistant headland, 202.
Caves by wave action, 670.
Water-worn pebbles, *287, 367, *672.
Water-formed sand, *513, 541, 850.

Rivers.

Canyon, *274, 290, 536.
Gorge, 65, *76, *77, *223, 242, *252, *576, 708, 772, *821, 913.
Natural bridge, 146.
Rapids, *855.
Falls, *69, *72, 73, *576, 697, *821.
Stream cutting on outside of bend, *76.
Valley and tributary valleys, *483, *524, 551.
Valley that is old, *548, *792.
Valley that is young, *274, 772.
Water-worn pebbles of river, 385, 552, *590, *821.

Underground streams and the caves they form, 147, *148.

The ice river or glacier, *313, *384, 583, *591, *710, 712, 722, 759.

The snowfields which are its source, *705, 714, 718, *719, 996.
Track of an avalanche, *724.
Pebbles from the glacier, *590.
Typical glacial valley, 575.

Boulder transported by the glacier, *49.
Grooves and scratches made by the glacier in the underlying rock, *49, 50.
Icebergs, formed as the glacier moves into the sea, *318, *389, *391, *396.

Rain.

Rising vapor, 184, 958, 976.
Clouds, 251, 289, 341, *366, 402, *586, *587, *595, *758, *771, 793, *795, *831, *891, *956, 958.
Effects of rain, 247, 248.
Gullies, *273, 382.

Frost, *80, *710.
Weathering, *292, 675. See also soil formation.
Wind erosion, 248, *796.

CONSTRUCTIVE AGENCIES

The Volcano, active, *346, *347, *436, *438, *730, 746, *956, 957, 976, *977; old, *301.

Molten lava, *346.
Lava beds, *271, *272, 345, *346, *438, 439, *731.

Wave construction, *164.
Wave and wind, *10, 11, 793.
River action.

Alluvial deposits, *331.
Alluvial plains, *792, *876, *921, 933.
Delta, *80, 175, *792.
River building on inside of curve, *108, 877.

Springs and their deposits, *237, *855, *994.

Geysers, 240, *241, *994, 995.
Glacial deposits.

Lateral and medial moraines, *710, 714, *721.
Terminal, *590.
Pebbles and boulders, *49, *590, *593.

SUGGESTED USE

Physical phenomena are so commonplace they furnish admirable material for direct study. The rocks, the soil, the destructive and constructive agencies are everywhere represented, and the study of them properly begins with the local materials that are available. But in many localities no outcropping bed-rock exists, the soil shows no diversity of character, the active agencies are limited, many important ones are not represented. The pupil may begin with local phenomena, but to get a moderately complete idea of the history of surface topography and the forces that affect it, he must travel widely either in reality or in imagination with the aid of such stereographs as are here available. A group of grade pupils is taken across country, for instance, to the local stone quarry. Here, level strata of limestone are in evidence with fossils, glacial grooves and scratches. Perhaps there are water-worn caves on a small scale with stalactites. Here may be seen weathering, rock disintegration. The local pond may give phases of erosion, deposition. And these

all need to be observed at first-hand. It may be the overlying soil, cut through to reach the rock layers at the quarry, shows glacial pebbles of granite or diorite. Now, where have these come from, and what agencies caused the scoring and scratching of the limestone's surface? How do these pebbles come to be here, and in what sort of strata do they occur? To answer these and similar questions, the teacher needs to create correct images of the great glacial movement, the crumbled and metamorphosed rocks of the northern lands. To accomplish this, and to make the story the local materials tell fit into the more comprehensive history they form a fragment of, is a task that will be simplified greatly by these stereographs. And the commonplace things right around us lose their insignificance and assume importance when such wide meaning comes to attach to them. The glacial age may be made very vivid with the aid of such stereographs as 49, 718, 759, etc.

For a much fuller and more detailed treatment of physical features see the cross-reference classification on Physical Geography.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs, suitable for wall decoration, of any subject in the above list in sizes 16 x 20—20 x 24.

PHYSICAL GEOGRAPHY

EDITED BY
WALLACE W. ATWOOD, Ph.D.,
PROFESSOR OF PHYSIOGRAPHY, HARVARD UNIVERSITY.

439 STEREOGRAPHS OR SLIDES WITH 900 REFERENCES TO THEM

The stereographs or slides here listed are arranged and classified under the different topics of Physical Geography and may be used with any of the modern text books. No matter what the subject, the teacher, by use of this classification, will be able to find instantly just the types needed to illustrate the lesson.

These splendid stereographs are not miniature pictures, but when viewed through the stereoscope become life-size representations in three dimensions of the real object or place. Therefore, to use these in the right way is practically to take the students into the field and study at first hand the wonderful developments of the earth and its attendant phenomena. In physical geography it is of great importance that each student has a correct visual image of the land forms studied. These views should be used at the opening of a lesson or series

of lessons. Whenever it is possible the student should be allowed freedom for the study and review of his lessons with the help of the views. The constant use of these views will add greatly to the educational effectiveness of the teacher's work.

It is suggested that the teacher place some simple rules of observation such as those which follow, on the blackboard, at the beginning of a lesson in Physical Geography in which any of the following illustrative material is used. Such an outline has been found helpful in directing the pupil's attention at once to the most important things to look for in his study of each stereograph.

OBSERVATION OUTLINE

1. What should this scene be studied for?
2. Where is it?
3. What land forms are shown here?
4. How could I best describe these forms briefly?
5. Have I seen similar forms or pictures of similar forms?
6. What may be the cause of these features?
7. How has the physical conditions in this region affected man in the building of his home or in his occupations?
8. What questions shall I ask the teacher so that I may understand better what I see here?

(NOTE.—For further material on *Physical Geography*, the teacher is referred to the much more extensive material in our general catalogue.

The numbers below are the serial numbers found in the upper right-hand corners of the stereographs and on the slides. The starred numbers are the ones included in the 600 series.—THE PUBLISHERS.)

WEATHERING AND EROSION

SEA EROSION

14 Reef of Norman's Woe, Cape Ann.
*366 Perce Bay, Quebec.
367 Perce Rocks, Perce, Quebec.
*423 Morro Castle, Santiago, Cuba.
*476 Rock-ribbed South American Coast, Peru.
*513 Chalk Cliffs at Dover, Eng.
*518 Land's End, England.
541 Tantallon Castle, Scotland.
*562 Giant's Causeway, Ireland.
563 The "Honeycombs," Giant's Causeway, Ireland.
564 The Organ, Giant's Causeway, Ireland.
565 Splendid cliff at Menawn, Ireland.
*570 Cliffs at Loop Head, Ireland.
673 Ducal palace overlooking the sea, Monaco.
*692 Gibraltar, Spain.
733 Amalfi, Italy.
*828 Cape of Good Hope.
954 East over Mississippi Bay, Japan.

RIVER EROSION

65 Watkins Glen, N. Y.
73 Under the Luna Falls, Niagara.
*76 Whirlpool Rapids, Niagara.
*223 Dalles of Wisconsin.
*269 Canyon Diablo, Arizona.
*274 The sinuous Colorado, Grand Canyon.
275 On the Grand View Trail, Grand Canyon.
277 Indian Gardens, Grand Canyon.
*278 Grand Canyon from Rowe's Point.
374 Muskoka Rapids, Canada.
*472 Oroya River, Peru.
536 The eroded rocks in the Fairy Glen at Bettws-y-coed, Wales.

*576 Beside the Rjukanfos, Norway.
581 The Skiaeggedals Falls, Norway.
603 Falls at Trollhatten, Sweden.
*633 Upper Danube, Germany.
697 Falls of the Rhine, Switzerland.
708 Aare Gorge, Switzerland.
*821 Victoria Falls and Gorge, East Africa.

ACTION OF THE WIND, FROST AND RAIN

*80 The Palisades, Hudson River.
184 Lookout Mountain, Tenn.
289 El Capitan in Yosemite Valley.
290 From Glacier Point to Yosemite Falls.
*291 From Glacier Point over Half Dome.
*301 Crater Lake, Oregon.
302 Mt. Hood, Oregon.
367 Perce Rocks, Perce, Quebec.
*368 Gannet Ledges in St. Lawrence.
*461 Traveling in the Andes, Ecuador.
480 Down from El Misti, Peru.
*513 Chalk Cliffs at Dover, Eng.
636 Lorelei Rocks on the Rhine.
675 Old Aqueduct in Spain.
*699 Rocky slopes of Pilatus, Switzerland.
708 Aare Gorge, Switzerland.
717 Aiguille Rouge to Mt. Blanc, Switzerland
733 Amalfi, Italy.
757 Drei Zinnen, Austria.
791 Up the Great Pyramid, Egypt.
840 Mount of Moses, Sinai.
841 Sinai Wilderness.
849 Wilderness of Scapegoat, Palestine.
*876 The "waters assuaged"—great plains left after floods in Mesopotamia.
*944 China's old Wall.
996 Mt. Elliot, New Zealand.

CONSPICUOUS ACTION OF FROST

290 On Glacier Point, Yosemite Valley, California.
*291 Half Dome, Yosemite.
379 The Three Sisters, Alberta, Canada.
*713 The Matterhorn, Switzerland.
757 Drei Zinnen, Austria.
996 Mt. Elliot, New Zealand.

ACTION OF GROUND WATER

146 Natural Bridge, Va.
147 Luray Caverns, Va.
*148 Luray Caverns, Va.
276 Limestone Cave in Grand Canyon, Arizona.

GLACIAL EROSION

*49 Glacial scratched native rock in Bronx Park, N. Y. City.
50 Rock grooved and seamed by the glaciers, Bronx Park, N. Y. City.
*381 Lake Louise and Mt. Victoria, Alberta, Canada.
*384 In the track of a glacier, the Selkirks, British Columbia.
575 Snowy heights of Mt. Gausta, Norway.
*587 Maelkevold Glacier, Norway.
*589 The Brigsdal Glacier, Norway.
*590 Kjendal Glacier, Norway.
*592 Down the Vidde Valley, Norway.
*700 From Summit of Mt. Pilatus, Switzerland.
*701 The Ur-Rothstock, Switzerland.
*705 The Jungfrau, Switzerland.
*710 Huge river of ice, Fiescher Glacier, Switzerland.
711 The Great Aletsch Glacier, Switzerland.
718 Mont Blanc, Switzerland.
720 On Aig du Tacul, Switzerland.
*721 The Mer de Glace, Switzerland.
759 The Ortler from Trafoi, Tyrol, Austria.

PECULIAR FORMS CAUSED BY EROSION

*246 The Gateway of the Garden of the Gods, Colorado.
247 Eroded forms in Garden of the Gods, Colorado.
248 Weird forms of eroded rocks in the Garden of the Gods, Colorado.
367 Perce Rocks, Perce, Quebec.
*570 Cliffs at Loop Head, Ireland.
636 Lorelei Rocks on the Rhine, Germany.
*692 Gibraltar, Spain.
*713 The Matterhorn, Switzerland.
717 Aiguille Rouge, Switzerland.

TALUS

244 Gray's and Torrey's Peaks, Colorado.
*253 Stage road in Rocky Mountains, Colorado.
*380 Beautiful valley of the Bow, Alberta, Canada.
*381 Lake Louise and Mt. Victoria, Alberta, Canada.
382 At base of Mt. Stephen, B. C., Canada.
471 In the Rimac River Gorge, Peru.
491 In the Andes Mountains, Argentine.
711 The Great Aletsch Glacier, from the Eggishorn, Switzerland.
996 Mt. Elliot, Australia.

EROSION

See also numbers *490, 588, *631, *667, *724.

SAND DUNES

*10 Sand dunes on Cape Cod, Mass.
11 Pine forest being buried beneath the drifting sands, Cape Cod, Mass.
793 From summit of Great Pyramid.
*795 The Sphinx and Pyramid.
*796 Watching a sand whirlwind, Egypt.
804 Across front of Abu Simbel, Egypt.

RIVERS

YOUNG RIVERS

65 In Watkins Glen, N. Y.
*69 Niagara from Prospect Point.
70 On river below falls, Niagara.
*71 Niagara River, above falls.
*72 Down the river from Goat Island, Niagara.
74 Niagara River, above falls.
*76 Down the river below the falls.
*77 Looking up Niagara River from below the falls.
*223 Wisconsin River.
242 Yellowstone River.
*243 Yellowstone River.
*274 Colorado River, Grand Canyon.
*304 On the Columbia River, Oregon.
374 The Muskoka River, Canada.
*380 Looking up the Bow River, Alberta, Canada.
471 The Rimac River, Peru.
*472 The Rimac River at Chaupichaca, Peru.
536 In the Fairy Glen at Bettws-y-coed, Wales.
581 Where the Skiaeggedals Falls leap 525 feet, Norway.
588 Rustoen Falls cutting a channel in the rocky slopes of Rustoefjelds, Norway.
603 Toppo River, Sweden.
888 River Sutlej, North India.

OLDER OR MORE-MATURE RIVERS

*48 The Hudson below the Palisades.
*54 Up the Hudson from West Point.
*57 The Hudson near Newburgh, N. Y.
*331 On the Chagres River, Panama.
*509 The Thames at Windsor Castle.
510 The Thames at Henley, England.
*524 The river Teme and country around Ludlow, England.

552 "Brig O'Turk" over the stream at Glenfinlas, Scotland.
*633 The Danube River, not far from the Black Forest of Baden, Germany.
*634 Neckar River, from above Heidelberg, Germany.
*635 The Rhine River, near Bingen, Germany.
637 The Rhine at Coblenz, Germany.
*638 The Rhine at Cologne, Germany.
666 The River Meuse, France.
*736 The Arno at Florence, Italy.
*798 The Nile River, Egypt.
802 The Nile River at Philæ, Egypt.
*876 The Euphrates as first seen from the Mediterranean.

OLD RIVERS

*548 The winding Forth River from Stirling Castle, Scotland.
619 Dnieper River at Kief, Russia.
750 Salzburg and the winding Salzach River, Austria.
*874 Traditional Garden of Eden.
*875 Irrigation on the Euphrates River.
878 East over the Tigris to Mound of Nineveh.
*880 Building peculiar boats near Bagdad on the Tigris.
*881 Pontoon bridge, Bagdad.
*885 The winding Jhelum in the Vale of Cashmere, India.
*987 One of the most fertile valleys in Australia.

RIVER SOURCES

244 Young rivers forming in the Rockies.
*814 The beginnings of the historic Nile, Egypt.
*855 The main source of the Jordan River, Palestine.

DELTAS AND TORRENTIAL FANS

175 Dike along delta of Mississippi.
*579 Sunny fields of Odde, Norway.
580 Building of a flood plain, Norway.

*586 Fan delta on Lake Olden, Norway.
*716 Village of Glion built on a torrent on Lake Geneva, Switzerland.
*724 A mountain hamlet built on a torrent fan at the foot of La Brevent, Switzerland.
*792 The delta of the Nile River, Egypt.

RIVER MOUTHS

*29 Mouth of the Hudson.
*30 Mouth of the Hudson.
*33 Just above the mouth of the Hudson.
385 Mouth of the "Thron Duick" River, Alaska.

RIVERS

See also numbers *215, 300, *306, *487, *496, 497, 636, *651, *657, 678, *726, 804, 823, 916.

RAPIDS

74 The Rapids above the falls, Niagara.
*76 Whirlpool rapids, Niagara River.
374 Rapids in the Muskoka River.
603 The Toppo Falls, Trollhattan, Sweden.
697 The falls of the Rhine, Switzerland.
*855 The Jordan at its source, Palestine.

FALLS

*25 Falls at Lawrence, Mass.
65 Fairy Cascade, Watkins Glen.
*69 Niagara Falls, from Prospect Point.
70 Niagara Falls, from "Maid of the Mist."
*71 Canadian Falls, Niagara.
*72 American and Luna Falls, from Goat Island.
73 Under the Luna Falls, Niagara.
75 Mountain of frozen spray, American Falls, Niagara.

*226 Falls of St. Anthony, Minn.
242 Lower falls of the Yellowstone.
290 Yosemite Falls, Cal.
*576 Spray-enshrouded Rjukanfos Falls—800 feet, Norway.
*577 The Vrang waterfall, Norway.
581 Where the Skiaeggedals Falls leap 525 feet, Norway.
*586 The water from a glacier feeding Lake Olden, Norway.
588 Rustoen Falls as they seem to come out of the sky, Norway.
*814 Lake Victoria Nyanza pouring its waters over the rim to form the Nile River, East Africa.
*821 Famous Victoria Falls, East Africa.

VALLEYS

Under the headings Gorges, Canyons and Valleys may be found excellent examples of many kinds of valleys in various stages of development from the narrow gorge, cut in solid rock, to valleys so old that they have developed broad flood plains. The teacher will find here excellent examples of the V-shaped and U-shaped valleys that have heretofore been lacking.

YOUNG VALLEYS (GORGES)

65 Watkins Glen, N. Y.
*72 From Goat Island down the gorge, Niagara.
*76 Through the Niagara Gorge.
*250 In the Royal Gorge, Colo.
*252 Box Canyon, Ouray, Colo.
*472 The gorge of the Rimac River, Peru.
536 Fairy Glen, Bettws-y-coed, Wales.

*576 Gorge of the Rjukanfos, Norway.
708 The wonderful gorge of the River Aare, Switzerland.
913 Gokteik Gorge, North Burma.

YOUNG VALLEYS (CANYONS)

242 Yellowstone Canyon, below the lower falls.
*243 Down the Grand Canyon of the Yellowstone.
*253 Stage road between Ouray and Red Mts., Colo.
255 Canyon in Mesa Verde Park, Colo.
*269 Canyon Diablo, Arizona.
*274 The Grand Canyon of the Colorado, from Point Bissel.
275 On the Grand View Trail, Grand Canyon.
277 Indian Gardens, Grand Canyon.
*278 Grand Canyon from Rowe's Point.
*288 Yosemite Valley, from New Inspiration Point, Cal.
471 Rimac River Gorge, Peru.
772 Langada Gorge, Greece.

OTHER YOUNG VALLEYS

*380 Bow River Valley, Alberta, Canada.
*383 Roger's Pass, B. C., Canada.
*667 Road to Gavarnie, France, looking toward Pyrenees.

VALLEYS SHOWING EARLY MATURITY

*108 Delaware Water Gap.
118 In the Conemaugh Valley.
*236 Valley of the Yellowstone.
382 At base of St. Stephen, B. C.
*483 Sunny valley in Andes, near Cuzco, Peru.
*912 Dredging a river bed and searching for rubies, Mogok, Burma.

MORE-MATURE VALLEYS

*27 The valley of the Ammonoosuc River, N. H.
184 The valley of the Tennessee River.

*187 On the Mississippi.
350 On the Passig River, Philippine Islands.
*460 Toward Mt. Chimborazo, Ecuador.
*524 Valley of the Teme, England.
*548 Valley of the Forth, from Stirling Castle, Scotland.
*549 Valley of the Forth, Scotland, north from Stirling Castle.
550 West up the beautiful Forth Valley, from Stirling Castle, Scotland.
575 The U-shaped Maan Valley, Norway.
*592 The U-shaped Vidde Valley, Norway.
*633 Upper Valley of the Danube, Bavarian Mountains, Germany.
*634 Neckar River from above Heidelberg, Germany.
*635 The Rhine Valley, near Bingen, Germany.
664 Valley of the river Meuse, Sedan, France.
750 Valley of the Salzach, from the Castle Salzburg, Austria.
*758 An Austrian hamlet, Val Ampezzo.
*792 The delta of the Nile River, Egypt.
*798 Along the valley of the Nile, Egypt.
802 The Nile valley at Philæ, Egypt.
*885 The Vale of Cashmere, India.
898 River Ganges at Benares, India.
914 The Irrawaddy River, Burma.
*921 Charming valleys of Interior Ceylon.
*928 Chukiang River, Canton, China.
933 Paddy fields in the interior of China.
*972 Rice farms in interior of Japan.
*982 Overlooking Melbourne and its environments, Australia.
*992 On a hop farm in Tasmania.

DROWNED VALLEYS

*48 Hudson River below Palisades.
*54 Hudson River north from West Point, N. Y.

*57 Up the Hudson, near Poughkeepsie, N. Y.
*128 Down the Potomac Valley from Washington, D. C.

VALLEYS

See also numbers *77, 289, 290, *291, *306, *578, *632, 671, 674, 703, *713, 715, *756, 757, 759.

PLAINS

COASTAL PLAINS

59 A truck farm on Long Island, N. Y.
82 Along the boardwalk at Atlantic City, N. J.
*129 Washington, D. C., from monument.
*130 East from monument over Washington, D. C.
144 Fort Myer, Va.
*149 In great pine forests, North Carolina.
*150 Soil of an uplift plain, N. C.
152 East along Government dike, Georgetown, S. C.
*160 Cotton plantation in Georgia.
*164 Beach at Ormond, Florida.
*166 Pine-grown sand levels at Daytona, Florida.
*170 Plowing at Tuskegee, Ala.
*468 Irrigated land at foot of the Andes, Peru.
*469 On a farm at Santa Clara.
*470 On plains between Lima and Andes Mountains, Peru.
617 Sand wastes, Nijni Novgorod, Russia.
619 Alexandrofski slope and winding Dnieper, Russia.
*646 Miles on miles of peaceful pasture in Holland.
652 "Field of the Cloth of Gold" north of France.
*768 Marathon battlefield, Greece.

RIVER FLOOD PLAINS

*548 Overlooking the valley of the winding Forth from Stirling Castle, Scotland.
*549 North from Stirling Castle over the valley of the Forth, Scotland.

550 From Stirling Castle west up the Forth Valley, Scotland.
*824 Near head of Congo steamer navigation, Congo Free State.
*874 The traditional "Garden of Eden," looking east over the Euphrates Valley, 250 miles N. W. of Babylon.
*875 Irrigation on the Euphrates, where men have toiled since Adam left Eden.
*876 The Euphrates River after the floods.
*885 Vale of Cashmere, India.

LAKE PLAINS

256 Salt Lake City, built on site of an extinct lake.
551 Ben Venue across Loch Achray, Scotland.
*600 The country around Rattvik, Sweden.
854 Plain of Gennesaret, Palestine.

GLACIAL PLAINS

*201 Sheep pasture in Michigan.
*216 On a farm in Illinois.
*371 Overlooking Montreal.
*375 Winnipeg and surroundings.
*543 Pasture near Thurso, Scotland.
544 Cattle in pasture near Thurso, Scotland.

ALLUVIAL PLAINS

*403 West from Pueblo, Mexico.
*414 Farming in Mexico.
528 Plowing in England.
845 Plowing in Plains of Sharon, Palestine.

PRAIRIES

*193 Corn fields of Osage, Kansas.
*216 Ploughing on a prairie farm in Illinois.
*831 Sheep grazing on the veldt, S. Africa.

UNDULATING PLAINS

429 A sugar plantation in Caracas, Cuba.
*460 Toward ice-crested Chimborazo, Ecuador.
*543 Undulating plains near Thurso, Scotland.
544 Cattle on plains near Thurso, Scotland.
*650 Sunny fields near Courtrai, Belgium.
*987 Broad stretches of fertile valley in Australia.

PLATEAUS

*243 Dissected plateau in Yellowstone.
255 Dissected plateau in Arizona.
*257 Cattle on Arizona plateau.
258 Herding cattle on the plateau, Arizona.
*259 Roping a yearling on the Arizona plateau.
*262 Typical home of Navajo Indians, Arizona.
*270 From Red to San Francisco Mountain, Arizona.
477 Plateau land in Peru.

PLAINS

See also numbers 55, *127, *279, *280, *282, *303, 310, *352, 402, *417, *451, *466, *601, *609, *634, 664, 690, 750, *761, *771, 774, 775, *776, 852, *910, 933, *992.

DESERTS (SAND)

*262 Great sand desert of Arizona.
*273 Painted Desert, Arizona.
788 The desert outside the East Wall of Cairo, Egypt.
*789 On the road from Cairo to the Pyramids, Egypt.
790 The Great Pyramid of Gizeh, Egypt.
791 Looking up the Great Pyramid, Egypt.
793 Southwest from summit of Great Pyramid, Egypt.
*795 The Sphinx and Great Pyramid, Egypt.
*796 The Great Desert from top of Hawara, Egypt.

DESERTS (MOUNTAINOUS)

345 In the crater of Kilauea volcano, Hawaii.
*347 Wilderness of lava around Mokuaweoweo Volcano, Hawaii.
*731 Wilderness of lava at base of Vesuvius, Italy.
840 Mount of Moses, Sinai.
849 Wilderness of the Scapegoat, Palestine.
*863 Bedouins in the mountainous wilderness of Syria.
957 Lava encrusted crater of Mt. Fuji, Japan.
*994 The Liao Hsi Mountains, China.

OASES

841 The oasis of Wadi Firan, Sinai Wilderness.
*842 Oasis of Wadi Gharundel, Sinai Wilderness.

HILLS AND MOUNTAINS

HILLS

*127 Oil wells in Pennsylvania.
*369 The city of Quebec.
*427 Hills south from Santiago, Cuba.
*524 Green country around Ludlow, England.
551 In the Trossachs, Scotland.
*566 Uniform slopes on the Island of Achill, Ireland.
*661 Sunny fields at Ay, France.
664 Gentle slopes on the battlefield of Sedan, France.
674 In northern Spain.
780 Across the Bosphorus.
*831 Sheep grazing on the veldt, B. S. Africa.
*832 Looking over Signal Hill, S. Africa.
854 The hills around Galilee, Palestine.
*863 Highlands of Moab, Syria.
*915 Pumping oil in the hills of Burma.
*924 Native farming in Ceylon.

933 Hills and mountains of interior of China.
947 War balloon in Manchuria.
*948 Over the hills into Port Arthur.
949 Bombarding Port Arthur.
950 Explosion of earth mine in hills around Port Arthur.
*992 Prosperous farm at New Norfolk, Tasmania.

See also numbers 1, *2, *400, 510, *548, *549, 550, *634, *635, 706, *781, *798.

BUTTES AND MESAS

260 Petrified Forest, Arizona.
*261 Mesa village, Arizona.
539 Butte near Holyrood, Scotland.
*547 Stirling Castle, Scotland.
*829 Cape Town and Table Mountain, South Africa.
*831 On the veldts of British South Africa.
832 Looking into Orange Free State, South Africa.

MOUNTAINS (*United States*)

*27 Mt. Pleasant and Mt. Stickney in the White Mountains, N. H.
*54 North from West Point, N. Y.
55 The mountains around West Point.
184 In the Cumberland Mountains near Chattanooga, Tenn.
235 Gallatin Mountains, Gardiner, Wyoming.
*236 Mountains around Fort Yellowstone.
*237 Mountains around Mammoth Springs Hotel, Yellowstone Park.
244 Gray's and Torrey's Peaks in Rocky Mountains, Colo.
*253 Mt. Abram, Colorado.
*265 Morenci Copper Mines, Arizona.
*270 State and San Francisco Mountains, Arizona.
*271 Red Mountain, a volcanic formation, Arizona.
*292 From Clouds' Rest, Yosemite Valley, over Sierra Nevada Mountains, Cal.

MOUNTAINS (*Alaska*)

317 Juneau, Alaska.
*318 Mountains around Taku Inlet, Alaska.
385 Mountains in the Klondike.

MOUNTAINS (*Panama*)

*332 Mountains rising from the sea, entrance to Panama Canal.

MOUNTAINS (*Pacific Islands*)

341 The mountains around Honolulu, H. I.
*347 The building of a volcanic mountain, H. I.

MOUNTAINS (*Canada*)

379 The "Three Sisters" in Alberta, Canada.
*380 Up the valley of the Bow, Alberta, Canada.
*381 Mt. Victoria, Alberta, Canada.
382 Mt. Stephen, Field, B. Columbia.
*384 In the Selkirks, B. Columbia.

MOUNTAINS (*Mexico*)

402 Ixtaccihuatl, Mexico.
413 Guanajuato, Mexico.

MOUNTAINS (*South America*)

*440 Mountains around Caracas, Venezuela.
*447 Mountains in Colombia, S. A.
*463 Center of the Andes, Ecuador.
*464 Near summit of Pichincha.
465 Pichincha's Peak, Andes, Ecuador.
*468 At foot of the Andes in Peru.
*469 Santa Clara, Peru.
*470 The Andes, near Lima, Peru.

*475 In the mining country, Peru.
*478 Pichapicha Mts., Peru.
479 El Misti, from Arequipa, Peru.
480 Coming down from El Misti, Peru.
*483 The Andes near Cuzco, Peru.
484 Over Cuzco to the Andes, Peru.
*486 In the straits of Magellan.

MOUNTAINS (*Europe*)

552 In the Trossachs, Scotland.
*555 Sugar Loaf Mountain, near Dublin, Ireland.
*571 Mountains around lakes of Killarney, Ireland.
575 Mt. Gausta, Norway.
*578 Mountains at Roldal, Norway.
*579 Mountain walled Sorfjord, Norway.
580 Mountains from Odde, Norway.
*582 Snowy heights of Hardanger glacier, Norway.
*585 Mountain walled Naerofjord, Norway.
*586 Mountains across Lake Olden, Norway.
*592 Mt. Skaala, Norway.
*631 Great Watzmann, Germany.
*667 Pyrenees Mountains, France.
*710 The Oberaarhorn, Switzerland.
718 Mount Blanc, Monarch of European Mountains.
720 Ascent of Aig du Tacul, Switzerland.
*721 Aig du Geant, Charmoz and Montanvert—the Alps.
*724 La Brevent, Switzerland.
757 Drei Zinnen, Austria.
*758 An Austrian hamlet—Val Ampezzo.
759 The Ortler from Trafoi, Austria.
*760 Marie Theresienstrasse, Austria.
*765 Lykabettos, Pentelikon and Hymettos from the Parthenon, Athens.
*771 Taygetos Mountains, Greece.
*776 Mt. Olympus, Greece.

MOUNTAINS (*Africa*)

*817 Snow-crowned mountain in Equatorial Africa.
840 Wilderness of Sinai.
841 Wadi Firan, Sinai.

MOUNTAINS (*Asia*)

849 Wilderness of the Scapegoat, Palestine.
872 Mt. Lebanon, Palestine.
*944 Liao Hsi Mountains, Manchuria.
*972 Farming in Japan.
*973 Picking tea in Japan.
*974 Looking toward Shikoku, Japan.
*975 Rice growing in Aso-San, Japan.
996 Mt. Elliot, New Zealand.

MOUNTAIN RANGES

*245 Mummy Range, Rocky Mountains, Colorado.
*684 Snowy Sierras, Spain.
*700 The Bernese Alps, from Mt. Pilatus.
*701 Ur-Rothstock, Switzerland.
703 The Alps from Berne, Switzerland.
711 West from the Eggishorn, Switzerland.
*891 Up to the everlasting snows of Mt. Kinchinjanga, India.

NOTED PEAKS

*246 Pike's Peak and Garden of the Gods, Colo.
300 Mt. Shasta, California.
302 Mt. Hood, Oregon.
*311 Mt. Tacoma, Washington.
*403 Popocatapetl, Mexico.
*437 Mt. Pelee, Martinique.
*460 Ice-crested Chimborazo, Ecuador.
479 Threatening majesty of El Misti, Peru.
*698 Mt. Pilatus, Switzerland.
*705 The Jungfrau, Switzerland.

*713 The Matterhorn, Switzerland.
*730 Vesuvius, Italy.
746 Mt. Etna, Sicily.
*956 Mt. Fuji, Japan.

DIVIDES AND PASSES

*108 Delaware Water Gap.
251 Marshall Pass, Continental Divide, Colo.
*383 Roger's Pass and Hermit Mountain, B. C., Canada.
709 Maloja Pass in the Alps.
715 St. Bernard Pass, Switzerland.
772 Langada Gorge, Greece.

MOUNTAINS

See also numbers 258, 388, *423, 424, *438, *451, 453, *457, *482, *553, 581, *587, 666, *716, 717, *731, 737, 748, *756, 762, *768, 770, 773, 774, *912, *921, 927.

SOME FAMOUS CLIFFS

*80 The Palisades along the Hudson River.
*288 Yosemite Valley from New Inspiration Point, Cal.
289 El Capitan, Yosemite Valley.
*291 Half Dome, from Glacier Point, Yosemite Valley.
*368 Gannet ledges on the St. Lawrence River.
*513 Chalk Cliffs, Dover, England.
*518 Cliffs at Land's End, England.
541 Tantallon Castle, Scotland.
*547 Stirling Castle, Scotland.
565 Cliffs of Menawn, Ireland.
*570 Cliffs at Loop Head, Ireland.
636 Lorelei Rocks, Germany.
673 Monaco, Monaco.
*692 Gibraltar, Spain.
*761 The Acropolis, Athens.
762 Southwestern side of Acropolis, Athens.
*828 Cape of Good Hope.
954 Cliffs on Mississippi Bay, Japan.

ROCKS AND BOULDERS

14 Reef of Norman's Woe, Cape Ann, Mass.
*49 Boulder in Bronx Park, N. Y. City.
65 Stratified shale in Watkins Glen, N. Y.
*71 Where Table Rock broke off, Niagara Falls.
73 The Cave of the Winds, Niagara.
*76 In the Niagara Gorge.
81 Bergen Hill, Hoboken, N. J.
146 Natural Bridge, Va.
202 Rocks on the shores of Lake Michigan.
*223 In the Dalles of Wisconsin.
*246 Entrance to Garden of the Gods, Colo.
247 Curious forms in Garden of the Gods, Colo.
248 Weird forms in Garden of the Gods, Colo.
*250 In Royal Gorge, Colo.
*252 In Box Canyon, Ouray, Colo.
*254 Cliff Palace, prehistoric home, Mesa Verde, Colo.
290 Glacier Point, Yosemite Valley.
*301 Crater Lake, Oregon.
367 Perce Rocks, Perce Bay, Quebec.
373 Rock Islands in the St. Lawrence River.
374 Rocks in the Muskoka River.
*389 Cape Sabine and Baffin Bay.
392 Eskimo homes in Ellesmere Land.
*461 Boulders in the Andes.
*476 Rock-ribbed South American coast.
*562 The Basalt rock of the Giant's Causeway, Ireland.
563 Close view of the Causeway, Ireland.
564 The Organ, Giant's Causeway, Ireland.
*576 By the Rjukanfos Falls, Norway.
581 Cliffs by the Skiaeggedals Falls, Norway.
588 Rustoefjeld's rugged heights.
603 The Toppo Falls, Sweden.
*631 On the Konig's See, Germany.
*632 Neuschwanstein, Germany.
*633 Upper valley of the Danube, Germany.

670 Rock-bound coast of Finisterre, France.
697 Falls of the Rhine, Switzerland.
*699 Rocky slopes of Mt. Pilatus, Switzerland.
702 Tunnels of the Axenstrasse, Switzerland.
708 Gorge of the Aare River, Switzerland.
*710 On the Eggishorn, Switzerland.
717 On the Aiguille Rouge, Switzerland.
*747 Southern Coast of Italy.
825 Victoria Falls, East Africa.

See also numbers *589, 733, 913, 976, *977.

HOT SPRINGS AND GEYSERS

*237 Pulpit Terrace, geyserite formation at the Mammoth Hot Springs, Yellowstone Park.
240 The crater of Old Faithful Geyser, Yellowstone Park.
*241 Old Faithful Geyser in action.
*994 The Geyser basin at Rotorua Lake, Whakarewarewa, New Zealand.
995 Boiling pool of Pohutu geyser, New Zealand.

CAVES AND CAVERNS

73 Cave of the Winds at Niagara.
147 Nature's fantastic decoration in the Luray Caverns, Va.
*148 Mammoth stalagmites and stalactites forming solid pillars in Luray Caverns, Va.
276 A limestone cave in Grand Canyon.

VULCANISM

VOLCANIC CONES

*270 San Francisco Mountain, Arizona.
300 Mt. Shasta, California.
302 Mt. Hood, Oregon.
*311 Mt. Tacoma, Washington.
341 In volcanic Hawaii.

402 Ixtaccihuatl, Mexico.
*403 Popocatapetl, Mexico.
*460 Ice-crested Chimborazo, Ecuador.
479 Threatening majesty of El Misti, Peru.
480 On the slopes of El Misti, Peru.
*730 Naples and Vesuvius, Italy.
746 Mt. Etna, smoking above its cloak of snow, Sicily.
*817 Mt. Kilimanjaro (19,700 feet), East Africa.
*956 Mt. Fuji, Japan, the most perfect volcanic cone in the world.
958 From the summit of Mt. Fuji, Japan.

VOLCANIC ERUPTION AND RESULTS

*347 Eruption of Mokuaweoweo, H. I.
*436 Eruption of Mt. Pelee, Martinique.
*438 Results of eruption of Pelee, St. Pierre, Martinique.

VOLCANIC CRATERS AND FISSURES

*271 Red Mountain, Arizona, the remains of an old crater.
*272 A close view of the lava ash of Red Mountain.
*301 A lake in the crater of an extinct volcano, Crater Lake, Oregon.
345 The crater of Kilauea, Hawaiian Islands.
*346 Lake of fire, crater of Kilauea, H. I.
957 Peering into the crater of Fujiyama, Japan.
*975 Rice fields in the alluvial soil of an extinct crater of Aso-San, Japan.
976 Fissure in the side of the present active volcanic cone of Aso-San, Japan.
*977 Gazing through sulphurous vapors into the crater's frightful depths, Aso-San, Japan.

VOLCANIC LAVA

345 A gorge in old lava, Hawaiian Islands.
*346 Molten lava in Kilauea, H. I.
*347 Lava around Mokuaweoweo, H. I.
*731 In the wilderness of lava at base of Vesuvius, Italy.

VOLCANIC ASH

*271 Red Mountain, Arizona.
*272 In the lava-ash formation of Red Mountain, Arizona.
439 Ash-covered ruins of St. Pierre, Martinique.

LAVA FLOES

310 The fertile soil of eroded lava floes, Washington.

SILLS, DIKES AND BOSSES

*80 The Palisades along the Hudson River.
81 Bergen Hill, N. J.
289 El Capitan, Yosemite Valley.
*562 Looking S. W. over famous Giant's Causeway, basalt rock in Ireland.
563 The "Honeycombs," Giant's Causeway, Ireland.
564 The "Organ," Giant's Causeway, Ireland.

EARTHQUAKES

*284 Results of earthquake in San Francisco, Cal.
285 Huge rents in the streets of San Francisco, Cal.
748 Messina, west between harbor and mountains, Sicily.
*749 Messina after the earthquake, Sicily.

COAST LINE AND SEASHORE

COAST AND BEACHES

14 Reef of Norman's Woe, Cape Ann, Mass.
*61 Life-savers on the Long Island Beach, N. Y.
62 Boisterous Atlantic from beach on Long Island, N. Y.
82 Along the beach at Atlantic City, N. J.
*83 Life on the Ocean Wave, Atlantic City, N. J.
*164 The beach at Ormond, Florida.
202 Along the shore of a great lake, Michigan.

*287 Shore of Santa Catalina Island, Cal.
*394 West coast of Greenland.
424 The Cuban coast from Santiago.
*476 Rock-ribbed South American coast, Peru.
*513 Cliffs at Dover, England.
*514 Beach at Southsea, England.
*518 Land's End, England.
541 Tantallon Castle, Scotland.
*562 Looking S. W. over Giant's Causeway, Ireland.
565 Cliffs at Menawn, Ireland.
*570 Cliffs at Loop Head, Ireland.
*665 Beach of Nice, France.
670 Rock-bound coast of Finisterre, France.
*672 Splendid example of gravel beach at Dieppe, France.
*692 The Spanish coast at Gibraltar.
733 The coast at Amalfi, Italy.
954 Japanese coast near Yokohama.

BAYS AND HARBORS

*29 New York Harbor.
*30 On a steamer in New York Harbor.
*43 Overlooking harbor from Park Row Building, New York City.
*45 Ellis Island in New York Harbor.
*48 The North River—a harbor for the battleship fleet.
*286 San Francisco Bay.
*315 Harbor at Seattle, Washington.
317 Harbor at Juneau, Alaska.
*320 Harbor at San Juan, Porto Rico.
*325 Columbus' first landing place on the Isle of Porto Rico.
*349 Manila Bay, Philippine Islands.
*361 Harbor at Cebu, P. I.
*366 Perce Bay, Quebec, Canada.
388 Harbor at Vancouver, B. C.
*391 Harbor in Baffin Bay, Arctic.
*422 In Havana Harbor, Cuba.

*423 Santiago Harbor, Cuba.
*451 Harbor of Rio de Janeiro, Brazil.
*584 Bergen Harbor, Norway.
*604 Busy Harbor at Copenhagen, Denmark.
666 Harbor of Nice, France.
689 Cadiz, Spain.
*730 Port of Naples, Italy.
*740 Venice, Italy.
*761 Piræus, seaport of Athens, Greece.
*768 The bay at Marathon, Greece.
773 Overlooking Delphi, Greece.
839 Smyrna and its harbor, Turkey.
927 The harbor of Hong-Kong, China.
*946 Port Arthur, Manchuria.

See also numbers *492, *495, 545, *554, *572, *687, *692, 693, 748, *749, *777, 778, *805, 954.

FJORDS, INLETS AND ESTUARIES

*318 Taku Inlet, Alaska.
388 Harbor at Vancouver, B. C.
*579 Up the narrow, mountain-walled Sorfjord, Norway.
580 Overlooking Odde and the Sorfjord, Norway.
*584 Bergen and Puddefjord, Norway.
*585 The beautiful Naerofjord, Norway.

STRAITS

*486 In the Straits of Magellan.
*747 Messina Strait, Italy.
780 The Bosphorus, Turkey.
*781 The Bosphorus from European side, Turkey.

PROMONTORIES

*451 Harbor of Rio de Janeiro, Brazil.
*513 Dover Cliffs, England.
*562 Giant's Causeway, Ireland.

636 Lorelei Rocks, Germany.
673 Monaco, Monaco.
*692 Gibraltar, Spain.

CAPES

*391 Cape Sabine, Baffin Bay.
*595 Over cliffs of Spitzbergen, Norway.
*828 Cape of Good Hope.
*946 Entrance to Port Arthur, Manchuria.

ISLANDS

*69 Goat Island, Niagara River.
74 The islands above the Falls, Niagara.
*165 Pelican Islands, Florida.
*287 The Catalina Island, Cal.
*301 Island in Crater Lake, Oregon.
*332 Islands at Pacific entrance to Panama Canal.
373 Thousand Islands, St. Lawrence River.
*451 Overlooking Rio de Janeiro and Harbor.
*553 Ellen's Isle in Lake Katrine, Scotland.
*571 Islands in Lake of Killarney.
802 Island of Philæ, Egypt.
*994 Island in Roturua Lake, New Zealand.

GLACIERS

*312 Stephens Glacier, Washington.
*314 Sun-scarred face of Nisqually Glacier, Wash.
*384 Great Illicillewaet Glacier, B. C., Canada.
*582 Hardanger Glacier, Norway.
*589 The great Brigsdal Glacier, Norway.
*667 Glacier-covered heights of the Pyrenees, France.
*684 The snow-crowned Sierras, Spain.
*705 The Jungfrau, Switzerland.
711 Great Aletsch Glacier and Lake Marjelen, Switzerland.
717 Mont Blanc from Aiguille Rouge, Switzerland.

759 The Ortler, Tyrol, Austria.
996 Jarvois Glacier, New Zealand.

See also *698, *700, *701, *713, 720, *724, *760, *891.

ERRATICS

*49 Rock that was left by a great glacier in N. Y. City.
*721 Rocks on the Mer de Glace; where will they finally rest?
723 Huge boulder borne on the bosom of the Mer de Glace, Switzerland.

CREVASSES

*313 Awful depths of crevasse in Stephens Glacier, Wash.
*590 Crevasses in Kjendal Glacier, Norway.
*591 Mountains and chasms of ice in Brigsdal Glacier, Norway.
712 Edge of Aletsch Glacier, Switzerland.
*719 Crevasses near top of Mt. Blanc, Switzerland.
723 Crevasses in Mer de Glace, Switzerland.

MORAINES

302 Eliot Glacier, from lateral moraine, Oregon.
*314 Sun-scarred Nisqually Glacier, Washington.
*384 Lateral moraine of the Illicillewaet Glacier.
*705 The Jungfrau, Switzerland.
*710 Splendid example of a medial moraine in great Fiescher Glacier, Switzerland.
714 Good example of lateral moraine.
718 Good moraine formation on Mont Blanc, Switzerland.
*721 Moraines of the Mer de Glace.
722 Great ice fall at end of Mer de Glace, forming a terminal moraine.
759 The Ortler, Tyrol, Austria.

GLACIAL WASH

*590 At the mouth of Kjendal Glacier.
*667 In the Pyrenees, France.

ICEBERGS AND ICE FIELDS

*318 Icebergs in Taku Inlet, Alaska.
*389 Field ice in Baffin Bay.
*391 Icebergs in Baffin Bay.
*394 Ice fields in Greenland.
*396 Huge icebergs in Baffin Bay.

GLACIAL CIRQUE

244 Gray's and Torrey's Peaks, Colorado.
*667 Glacial cirque in the Pyrenees, France.

LAKES

GLACIAL LAKES

202 On the eastern shore of Lake Michigan.
*206 Lake Superior in distance.
*381 Lake Louise, Alberta, Canada.
551 Loch Achray in the Trossachs, Scotland.
*571 Lakes of Killarney, Ireland.
583 Stream of solid ice—Hardanger Glacier feeding directly into lake.
*586 Grytereids glacier in the mountains above the clouds, feeding Lake Olden by means of a mountain torrent.
*587 Maelkevold, a glacier that has crept farther down the valley and feeds the lake more directly.
*631 Konig's See, Bavaria, Germany.
711 Lake Marjelen, Switzerland.
*716 Lake Geneva, Switzerland.
757 Lake Misurina, Austria.

LAKES NOT GLACIAL

*301 Crater Lake, Oregon.
*444 Lake Maracaibo, Venezuela.
*475 Lake Paparcocha, Peru.

481 On Lake Titicaca, Peru.
*482 Lake Titicaca, Peru.
619 Ox-bows of the Dnieper River, Russia.
*814 Victoria Nyanza, E. Africa.
*822 Stanley Pool, Congo Free State.
850 The Dead Sea, Palestine.
854 Sea of Galilee, Palestine.
*885 Where the Jhelum will some day form an ox-bow, Vale of Cashmere, India.
945 Yellow Sea near Manchuria.

See also numbers 550, 712, 853, 923, *956, 958, *974.

MISCELLANEOUS

PEAT BEDS

*567 Digging peat in Ireland.

CLAY PITS

*519 China clay pit at Bugle, England.

QUARRIES

*28 Granite quarry at Concord, N. H.
*734, 735 Marble quarries at Carrara, Italy.

SALT

*620 Great salt fields in Russia.
*668 Great salt fields in France.
690 Stacks of salt on the marshy levels in Spain.

STORM AND SUNSHINE

*79 After a snowstorm in Prospect Park, Niagara Falls.
*279 Orange groves at Smiley Heights, Cal.
*282 Magnolia Avenue, Riverside, Cal.
353 Typhoon on beach, Philippine Islands.
*381 On Lake Louise, Alberta, Canada.
*578 Farming at Roldal, Norway.

*586 Clouds hovering over Lake Olden, Norway.
*595 The midnight sun in July, Arctic.
*758 An Austrian hamlet.
*796 Sandstorm on the desert, Egypt.
*956 Fujiyama towering above the clouds.
958 Looking down through the clouds from Fuji, Japan.
*961 Under the cherry blossoms, Japan.
*967 Under the bamboo trees, Japan.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

PRODUCTS AND INDUSTRIES

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343 STEREOGRAPHS OR SLIDES WITH 366 REFERENCES TO THEM.

In arranging this series on Products and Industries, the following main groups have been made:

I Food Products and Their Manufacture
II Clothing Products and Factory Processes
III Mining and Mineral Industries
IV Quarrying
V Lumbering and Forest Products
VI Irrigation
VII An unclassified group

Each of these main groups is divided and subdivided, as, for instance, the first group, "Foods," is divided into vegetable, animal and inorganic foods, each of these groups again being divided, as in the case of vegetable foods, into grains, fruits, nuts, etc.

This arrangement seems not only the most logical, but the one that will enable the teacher most quickly to get the material desired. It will be found that all the great industries have been treated, and many of the most important are covered in a thorough way.

The numbers here used are the serial numbers which will be found in the upper right-hand corner of the stereograph and also on the slides. The starred numbers are the ones included in the 600 series.

To help the pupils to utilize the study time for each stereograph to the fullest advantage, a few simple rules of observation given orally, or written on the board, and attention drawn to them at the beginning of the lesson, has often been found very effective. For lessons on *Products and Industries* with the stereographs, such an outline as the following, which may be used in whole or in part, or otherwise modified, is suggested:

OBSERVATION OUTLINE
FOR THE STUDY OF PRODUCTS AND INDUSTRIES

1. Where located?
2. What product or industry is seen?
3. Nature of product or purpose of industry? (as for food, clothing, heating, education, business, etc.)
4. Source of product seen (or produced by the industry)—vegetable, animal or mineral?

5. Process of production of the product—farming, manufacturing, mining, fishing?
6. What step in production is seen here?
7. What other steps are there?
8. In what season of the year is this product produced or this industry carried on?
9. How widely produced?
10. How widely used?
11. Is this product produced or industry carried on in your own state?—in the United States? If not, why?

(NOTE.—For a more extensive range of material, illustrative of "Products and Industries," the teacher is referred to our General Catalogue.—THE PUBLISHERS.)

I. FOODS

1. VEGETABLE PRODUCTS AND THEIR MANUFACTURE

(A) GRAINS

Wheat

Modern Methods

528 Using a motor plow to turn up the soil in England.
*309 Modern harvester in great western wheat fields, Washington.
*376 Threshing wheat in Manitoba.
*377 Sacking wheat in Manitoba.
*378 The great grain elevators in Manitoba.
*215 Loading whaleback ships at Chicago grain elevators. (The whaleback, having proved unsatisfactory, is now practically out of use.)

Primitive Methods

845 Plowing in plains of Sharon, Palestine.
674 Harvesting wheat with a sickle on a farm in Guipuzcoa, Spain.

652 Sheaves of wheat bound by hand on a field in northern France.
671 Peasants threshing on a farm in Brittany, France.
*799 Treading out the grain on the banks of the Nile, Egypt.
*851 Two women grinding at the mill in Palestine.
*861 Bread making in Syria.
*442 The bread mule on his rounds in Caracas, Venezuela.
*412 Making bread in Mexico.

Barley

630 Harvesting barley in Bamberg, Germany.
*974 Threshing barley with the flail, Japan.

Oats

*601 Cradling oats in Sweden.

Corn

*216 Preparing the soil—plowing in Illinois.
*193 Great field of corn near Osage, Kansas.
*200 20th Century harvesting machine, cutting and binding corn on a Michigan farm.

Rice

*357 Plowing a rice field in Luzon, P. I., with water buffalo.
*971 Pulling young rice ready for transplanting, spring work on a Japanese farm.
*972 Transplanting rice on a farm in Japan.
933 Great rice fields in China.
*975 Overlooking rice fields in old crater of Aso-San, Japan.
*920 Harvesting rice in Ceylon (using the sickle).
*181 Modern harvester cutting rice on a farm in Texas.
*182 Hauling rice to the thresher, Texas.
183 Threshing rice in Texas.
*886 Primitive method of shelling rice in Cashmere, India.
329 Pounding rice in interior Panama.
*908 Handling tons of rice in Rangoon, Burma.

Millet

*955 Cutting millet in Japan.

(B) POTATOES

59 Digging potatoes by hand on a Long Island truck farm, New York.

(C) SUGAR

Cane Sugar

429 A sugar plantation showing mills in background, Cuba.

*469 Planting sugar-cane on an irrigated farm, Santa Clara, Peru.

*470 Harvesting sugar-cane, Santa Clara, Peru.

*430 Hauling carloads of sugar-cane to the mill, Cuba.

*435 Crude method of grinding the sugar-cane, Jamaica.

*173 Sweetest spot on earth—sugar levee beside the Mississippi River, New Orleans.

Beet Sugar

*626 Women working in a field of sugar beets in Germany.

*210 Diffusion batteries where the juice is extracted from the sugar beets, Michigan.

*211 Evaporators where the purified juice of the sugar beet is boiled down to a syrup, Michigan.

*89 Sugar after leaving vacuum pan, before entering mould.

90 Moulds standing 48 hours to crystallize.

*91 Moving drying ovens where each sugar plate travels for two days.

(D) FRUITS

Bananas

*417 Overlooking one of the largest banana fields in the world, Costa Rica.

*344 In the heart of a banana plantation, Hawaiian Islands.

*434 Gathering bananas in Jamaica.
*331 Bringing bananas to the Chagres River for export, Panama.

Oranges

*279 Redlands and its wealth of orange groves from Smiley Heights, Cal.
*280 Picking oranges in one of the famous groves at Riverside, Cal.
*281 Flowers and fruit on an orange tree (close view).

Lemons

*744 Picking lemons in a grove near Palermo, Sicily.

Citron

433 Picking citron, Jamaica.

Breadfruit

*420 Picking breadfruit, Costa Rica.

Pineapples

*323 Delicious pineapples growing in the field, Mayaguez, Porto Rico.

Strawberries

*303 Irrigating a strawberry field, Hood River Valley, Oregon.

Raspberries

310 Picking red raspberries in Puyallup, Washington.

Dates

*686 Picking dates at Elche, Spain.

Grapes

*635 Terraced vineyards on the Rhine, Germany.
*661 Vineyards at Ay, in the champagne district, France.
*691 Picking, sorting and packing the famous Malaga grapes, Malaga, Spain.

Mangoes

401 Gathering mangoes in Mexico.

(E) NUTS

Cocoanuts

*343 Cocoanut palms in the Hawaiian Islands.
*167 Heavily laden cocoanut palms in the white sands of Florida.
*168 Fruits and blossoms of cocoanut palms (close view).
324 Husking the cocoanut crop in Porto Rico.

(F) BEVERAGES

Coffee

*922 Coolies picking the coffee berries on a plantation in Ceylon.
*817 Picking coffee in Province of Moschi, East Africa.
*408 Crude native method of husking coffee at Amatlan, Mexico.
*407 Coffee on the drying floor, Cordoba, Mexico.
406 Making bags from jute to hold the coffee, Orizaba, Mexico.

Tea

*973 Girls picking tea in Uji, Japan.
*932 Coolies unloading tea at Hankow, China.

Cacao

*419 Gathering cacao pods, one of Costa Rica's valuable products.
418 Opening the cacao pods and drying the beans on a plantation in Costa Rica.
*457 Material for 224,000 lbs. of chocolate bonbons—cacao beans curing, Ecuador.

Hops

*992 Acres of hops on a farm in New Norfolk, Tasmania.
630 Field of hops growing in Germany.

Pulque

*404 Extracting pulque, Mexico.
405 Gathering pulque, Mexico.

2. ANIMAL PRODUCTS AND THEIR MANUFACTURE

(A) DAIRYING

Milk

(*Cows*)

*592 Cows in Norway.
*585 Cows wading in a fjord in Norway.
*646 Cows in a pasture in Holland.
664 Dairy cows in France.
757 Dairy cows in Austria.
*679 Cow delivering "strictly fresh" milk in Valencia, Spain.
*645 Milk maids of Goes, with their pails of milk, Holland.
*642 Milk cart in Holland.
890 Bhutanese milkmen at Darjeeling, India.
*86 Milking time in a large sanitary dairy in New Jersey.
*87 Scientific method of sterilizing the bottles, Fairfield, N. J.
*88 Filling the milk bottles by machinery at Fairfield, N. J.
*66 In a separating room where the milk is being passed over refrigerating pipes.

Milk

(*Goats*)

*587 Goats in Norway.
*743 Goats being milked in the streets, Palermo, Sicily.

Butter

*862 A Bedouin woman churning, Syria.
*67 Modern circular churn, where hundreds of pounds of butter are worked and churned at the same time.
68 Butter being put up into pound packages, New York.
606 Packing prize butter for the European market, Denmark.

(B) TAKING AND PREPARING OF SEA FOODS

Codfish

12 Cleaning the cod on wharf, Gloucester, Mass.
13 Drying cod on the racks at Gloucester, Mass.

Salmon

*306 Seining Chenook salmon, Columbia River, Oregon.
308 Brailling—taking salmon from the trap for the great canneries, Puget Sound.
*307 Chenook salmon on the floor of a great cannery, Oregon.

Herring

*644 Herring boats at the wharf in Marken, Holland.
545 Great quantities of Scotch herring on the wharf at Wick, Scotland.

Fishing in Palestine

853 Fishing boats landing at Tiberias on the Sea of Galilee.

Whaling

*396 Whalers Diana and Nova Zembla in Baffin Bay.
*63 Getting at the blubber of the whale, Long Island Beach.

(C) MUTTON

*201 Prize winning sheep in Michigan.
*547 Sheep in pasture near Stirling Castle, Scotland.

*543 Bargains in sheep at the fair, Thurso, Scotland.
*831 Sheep on the veldt in South Africa.
991 Drink for 5,000 thirsty sheep, Australia.
*483 Sheep in pasture in Peru.

(D) BEEF

544 Highland cattle, Scotland.
813 Cattle in kraal in East Africa.
*257 Among the 30,000 cattle on Sierra Bonita Ranch, Ariz.
258 Moving a herd on Sierra Bonita Ranch, Ariz.
*259 Examining a yearling's brand, Arizona.
217 Grass and sunshine turned into beef—steers grazing in green pasture, Illinois.
*213 Cattle in great Union Stock Yards, Chicago.

(E) PORK

*218 Genuine corn-fed pork in pasture in Illinois.
*214 A half mile of pork in Armour's great packing house, Chicago.

3. INORGANIC PRODUCTS

(A) SALT

*668 Children collecting salt for stacking in vast fields, France.
690 Great salt stacks on marshy levels near Cadiz, Spain.
*620 Turning up the salt after evaporation in the great salt fields of Solinen, Russia.

(B) WATER AND ICE INDUSTRY

413 A water vender in Mexico.
*450 Water sellers in Barranquilla, Colombia.
*475 Squaws carrying water from Lake Paparcocha, Peru.
*680 Water sellers in Valencia, Spain.
893 Water sellers at Calcutta, India.
*464 Ice dealers of Quito, collecting snow near summit of Pichincha, Ecuador.

II. CLOTHING

1. VEGETABLE PRODUCTS AND FACTORY PROCESSES

(A) RUBBER

*411 Extracting rubber gum from the trees in a rubber grove, Mexico.
455 Packing rubber at Para, Brazil.

(B) HEMP

*361 Drying hemp on the Island of Cebu, P. I.
*363 Load of manila hemp at Cebu, P. I.

(C) PINA

*359 Weaving pina cloth in the Philippine Islands.

(D) FLAX

*650 Flax in stacks curing in the field, Courtrai, Belgium.
*651 Flax taken from the stacks and soaked in the river, Courtrai, Belgium.
*558 Hatcheling flax, first process in making the fine Irish linen, Belfast.
*559 Plain weaving room in a linen mill in Belfast, Ireland.
*557 Flax in bleaching field near Belfast, Ireland.

(E) COTTON

*468 Picking cotton in South America with Chinese help.
*160 Picking cotton on a plantation in Georgia.
*177 A cotton gin at work, Texas.
*178 Baling the cotton, Texas.
179 Shipping cotton to the manufacturing centers.
*180 Part of the 4,000,000 bale crop, awaiting shipment, Texas.
161 Hauling cottonseed to the factory, Georgia.
*154 Carding room in the Olympian Mills, S. Carolina.
155 Drawing frames in the Olympian Mills, S. Carolina.
*156 Spinning room in the Olympian Mills, S. Carolina.

*157 Warping room in the Olympian Mills, S. Carolina.
*158 Weaving room in the Olympian Mills, S. Carolina.
467 Weaving home-grown cotton in South America.
616 Cloth market in Russia.

2. ANIMAL PRODUCTS AND FACTORY PROCESSES

(A) WOOL

Sheep Raising

*483 Sheep in a pasture in Peru.
*831 Sheep on the veldt in South Africa.
*543 Bargains in sheep at the fair, Thurso, Scotland.
*547 Sheep in pasture near Stirling Castle, Scotland.
*201 Prize winning sheep (Shropshires) in a pasture in Michigan.
991 Drink for 5,000 sheep in Warrah, Australia.

Handling of Wool

*985 Where a sheep is shorn in five minutes by electricity, Australia.
986 Dalgetty's salesrooms, where wool buyers come from all parts of the world, Australia.
878 Loading bags of wool onto rafts on the Tigris River, ready for shipment, Mesopotamia.
17 Sorting wool into grades in a great woolen mill in Massachusetts.

Manufacturing Processes

*18 Carding the wool, Massachusetts.
*19 Spinning the wool in Massachusetts.
*20 Twisters at work in a great woolen mill, Massachusetts.
21 Foster winding machine in a great woolen mill in Massachusetts.
*22 Warping machine in woolen mills, Massachusetts.
23 Drawing-in and getting the ends ready for the looms, woolen mills, Massachusetts.
*24 In the great weaving rooms of a woolen mill in Massachusetts.

658 Weaving the wonderful Royal Gobelin tapestry in France.

Primitive Processes

*263 Home duties of the Hopi Indians, Arizona.
*264 Blanket weaving by the Hopi Indians, Arizona.
*669 Grandmother at her wheel in Breton home, France.
*887 Shawl weavers at Cashmere, India.

(B) SILK

Silk Culture (Syria)

*864 Feeding the silkworms their breakfast of mulberry leaves, Syria.
*865 Cocoons of the silkworm in the mulberry bush, Syria.
*866 Steaming cocoons to deaden the worms.
867 Purchasing cocoons for export, Syria.
868 Boiling cocoons to loosen the thread ends in a large reeling mill, Syria.
*869 Close view of the boiling process and unraveling of the cocoons—reeling mill, Syria.
*870 Examining and weighing the raw silk preparatory to shipping, Syria.

Silk Manufacture

***Primitive Methods* (*Syria*)**

*871 Primitive method of weaving the silk in Syria.

***Modern Methods* (*America*)**

The Throwster Trade

92 Winding the silk (first process in the throwster works).
*93 Doubling the thread and spinning the thread.
94 Reeling and lacing (throwster works).

The Skein-Dyeing Trade

*96 Weighting the silk in the solution of tin to give it body.
*95 Stripping the gum and dyeing the skeins.
97 Finishing the skeins of silk after weighting and dyeing.

The Weaving Mill

*98 Great warping machines at work in the weaving mill.
*99 In the mammoth weaving room, showing the looms at work.
104 Weaving taffeta ribbon.

Piece Dyeing and Finishing

100 In the dyeing room, showing piece dyeing after the cloth is woven.
*101 Color printing in the piece, machine that prints 10 colors.
*102 Breaking, folding and pressing the silk cloth.
*103 "Making up"—rolls of silk ready for the market.

(C) LEATHER

813 Cattle in kraal, East Africa.
*257 Cattle in Arizona.
*259 Roping a yearling in Arizona.
258 Cattle on a great ranch in Arizona.
*213 Cattle in great Union Stock Yards, Chicago.
217 Steers grazing in Illinois.
617 Siberian hides ready for the markets of the world, Nijni Novgorod, Russia.
445 Loading hides onto a steamer at Maracaibo, Venezuela.
*15 Cutting the leather forms at a shoe factory, Massachusetts.
*16 A welting machine at work in a shoe factory in Massachusetts.
*628 Girls sewing shoes in a factory in Germany.
*629 Polishing the heels and finishing the shoes at a factory in Germany.

(D) FURS AND FEATHERS

Seals

*287 Seals on beach of Santa Catalina Island, California.

Ostrich

*283 Ostrich farm in California.

III. MINING AND MINERAL INDUSTRIES

1. ORGANIC DEPOSITS

(A) ANTHRACITE COAL

*109 One of many coal breakers and culm dumps in Pennsylvania.

*110 Coal strata and miner drilling for a blast in anthracite mine, Pennsylvania.

*111 Hauling out the cars of coal by electric motor, anthracite mine, Pennsylvania.

*112 Coal on way to breakers to be broken into regular sizes, Pennsylvania.

*115 Coal breaker and automatic slate pickers in action, Pennsylvania.

*114 Boys picking slate in a great coal breaker, Pennsylvania.

113 On the slope of the mine; empty cars returning to be filled, Pennsylvania.

116 Miners and breaker boys ready for home after day's work, Pennsylvania.

978 Japanese women coaling a steamer.

(B) PEAT

*567 Digging peat in a bog in Ireland.

568 A fireplace for burning peat, Ireland.

(C) PETROLEUM

*915 Pumping oil in Yanangyet, Burma, with American machinery.

*127 Oil wells in western Pennsylvania—pumps at work.

85. Oil tanks on fire at Bayonne, N. J.

2. METALS

(A) IRON AND STEEL

227 Open-pit iron mining with 5-ton shovel, Hibbing, Minn.

*228 Digging iron ore with steam shovel and dumping on train, open-pit iron mine, Hibbing, Minn.

*229 A 5-ton shovel and its crew in an open pit mine, Hibbing, Minn.

230 Miners far underground in Sellers' iron mines, Hibbing, Minn.

*232 Iron miners at work in an underground drift, Hibbing, Minn.

*231 Dragging cars of iron ore through subterranean passages to the shaft.

*233 Docks with two miles frontage, holding 200,000 tons of iron ore, Minnesota.

209 Gigantic crusher and spouts feeding it with ore.

*195 Piles of iron ore at the receiving docks, Ohio.

*203 Pockets of iron ore (160 tons each) on long dock ready for shipment, Escanaba, Mich.

*234 Aboard a lake steamer, loading with iron ore by means of chutes from great docks, Duluth, Minn.

*196 Unloading iron ore—old and new method.

*198 Lowering a five-ton electric clam — unloading ore steamer.

*199 Electric unloader lifting five tons of ore from vessel's hold to the docks at Cleveland, Ohio.

*119 Great steel works at Homestead, Pa.

120 Red-hot iron flowing from blast furnace, ready for making into pig-iron.

*121 Steel beam, red-hot, being drawn out 90 feet long, Pittsburgh, Pa.

*43 Where some of the steel is used—constructing a skyscraper in New York.

*860 Swordmaker of Damascus, making the famous Damascus blades, Syria.

*560 Still another of the many uses of steel—building an ocean liner at Belfast, Ireland.

(B) COPPER

*265 Climbing the last loop on the mountain railway to the Morenci copper mines, Arizona.

*266 Inclines to the copper mines, Metcalf, Arizona.

*267 Loading surface ore at the Metcalf copper mines, Arizona.

268 In the mountain's heart, running out copper ore, Wilson Mine, Metcalf, Ariz.

*204 Shaft house and machine shop above richest copper mines on earth, Calumet, Michigan.

205 Copper in bars and plates leaving the smelters, Calumet, Mich.

(C) GOLD AND SILVER

277 Prospecting for gold, Indian Gardens, Grand Canyon.

*249 Nightingale Mine, Cripple Creek, Colo.

474 Work to-day at silver mine that enriched the Spanish centuries ago, Peru.

*319 Miners on the rim of the "Glory Hole" at Treadwell Mine, Alaska.

*387 Mine where a pan of gravel yielded $400 gold, Klondike.

*386 Gold miners at work in the Klondike country, Yukon, Canada.

836 Ore crushing mill in Johannesburg, South Africa.

837 Precipitating vats—extracting the gold from the ore at a mill in Johannesburg, S. Africa.

918 Native goldsmiths at work in Ceylon.

3. PRECIOUS STONES

(A) DIAMONDS

*833 A diamond mine at Kimberley, S. Africa.

834 Sorting the diamonds at De Beers mine in Kimberley, South Africa.

*639 Amsterdam, Holland, where many of the world's finest diamonds are cut and sold.

(B) RUBIES

*912 Dredging for rubies in a dry river bottom at Mogok, Burma.

917 Ruby washing plant at Mogok, Burma.

(C) MOONSTONES

919 Grinding moonstones at Kandy, Ceylon.

4. GLASS AND POTTERY

(A) GLASS

122 Modeling clay pots for molten glass, moving pot to dry room, Tarentum, Pa.

*123 Drawing pot of white hot liquid glass from the glowing furnace, Tarentum, Pa.

*124 Casting and rolling sheets of plate glass, Tarentum, Pa.

*125 Grinding plate glass with revolving iron disks, Tarentum, Pa.

*126 Workmen finishing plate glass windows in a polishing room, Tarentum, Pa.

(B) PORCELAIN

*519 China clay pit at Bugle, England.

*520 Grinding and mixing clay for making fine porcelain, Worcester, Eng.

*521 Dipping plates in glaze preparatory to firing, Worcester, Eng.

*522 Throwing plates on a potter's wheel, Royal Porcelain Works, Worcester, Eng.

523 Turning and trimming a cup on the lathe, Royal Porcelain Works, Worcester, Eng.

968 Potter at his wheel, fashioning a beautiful vase, Kyoto, Japan.

*969 Expert workmen decorating the famous cloisonné ware, Kyoto, Japan.

IN THE ORIENT

914 Hauling timber in Burma.
907 Elephants handling timber in Burma.
362 A Filipino sawmill, Cebu, P. I.
*934 Cultivated bamboo in China.

IN SOUTH AMERICA

446 A lumber yard in Venezuela.

(B) TURPENTINE, TAR AND RESIN

*149 Collecting turpentine in a pine forest, North Carolina.
*150 Sweating out the tar from pine wood in the turf-covered tar kiln, North Carolina.
*151 Distilling turpentine in a pine forest of North Carolina.
*159 The greatest resin market in the world, loading ocean vessels at Savannah, Ga.

(C) CORK

*681 The cork oak trees partly stripped, Almoraima, Spain.
682 Boiling the bark before scraping and pressing, Almoraima, Spain.
*683 Scraping and pressing the bark, Almoraima, Spain.

(D) MANUFACTURE OF PAPER

224 Scouring logs and hauling them up into the sawmill.
*219 Cutting logs ready for stripping and grinding into pulp, paper mill, Marinette, Wis.
*220 In the beater room, pulp made of wood from northern forests, Marinette, Wis.
*221 Wood pulp in big sheets ready for making into paper, Marinette, Wis.
*222 Making wrapping paper out of wood pulp, 250 feet per minute, Marinette, Wis.

VI. IRRIGATION

*875 Irrigation on the Euphrates River, Mesopotamia.
*797 Egyptian shaduf (well-sweep) used for lifting the waters of the Nile to the farms along its banks, Egypt.
*798 Irrigation in the fields along the Nile, Egypt.
*803 Great dam at Assuan, Egypt.
*182 Irrigation in the rice fields of Texas.
*303 Irrigating a strawberry field, Hood River Valley, Oregon.
*469 Irrigating a sugar-cane field in Peru.
*279 Some fine results of irrigation in Redlands, Cal.
*280 What irrigation has done for the arid lands at Riverside, Cal.

VII. UNCLASSIFIED

(A) HAYING

*600 Haying in Sweden.
*609 Haying in Russia.
*527 Unloading and stacking hay in England.
*566 Harvest time in the Island of Achill, Ireland.
*578 Haying in Norway.
*758 A farm in Austria.

(B) WHALING

*396 Whalers in the Arctic.
*63 Monstrous whale on beach, Long Island.
64 Head of whale, showing the much-prized whalebone, Long Island.
397 Loading sections of a huge whale onto the boats in the Arctic.

(C) IVORY

923 Elephants, showing tusks worth large amounts, Ceylon.
907 Elephants carrying timber, use of tusks, Burma.

925 In the jungle, the way the wild elephants are kraaled, Ceylon.

809 Ivory from the jungle on its way to America, Mombasa, East Africa.

(D) TOBACCO

*431 Cutting tobacco on a plantation in the province of Havana, Cuba.

*432 Making Havana cigars in a factory in Cuba.

(E) MISCELLANEOUS

*783 Making oriental rugs in Constantinople.

784 Renewing the colors in a faded oriental rug, Constantinople.

*78 Dynamos, 5,000 horse power, at Niagara Falls Power Co.

*560 Building an ocean liner at the Harland & Wolff shipyards, Belfast, Ireland.

574 An old Viking ship in Christiania, Norway, showing the way it was constructed.

889 Road making in India.

399 Floods of sombreros in Mexico.

*355 Making manila rope in the Philippine Islands.

415 Making rope from the maguey plant, Mexico.

*416 Making matting from the maguey plant, Mexico.

627 Dressing dolls for European and American trade, Sonneburg, Germany.

879 Sun-dried brick factory near the Tigris River, Mesopotamia.

*880 Making kufas (round boats) of date palms and rope on Tigris River, Mesopotamia.

*338 Locks in Panama Canal.

INDUSTRIES

See also numbers *25, *77, *226, *334, *336, 337, 339, *340, *513, *569, *724.

RACES OF MANKIND

EDITED BY

FREDERICK STARR,

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251 STEREOGRAPHS OR SLIDES WITH 251 REFERENCES TO THEM.

The stereographs and slides given below have been selected from the 1,000 list to show the most important types of mankind. These subjects have been carefully chosen not alone to show physical types, but also to illustrate and contrast the difference in temperament, mentality, etc., as shown in their various characteristic occupations, and the stage of progress indicated by processes of labor.

Humanity is so complex that the lines of distinction between the numerous branches cannot be sharply drawn. Authorities disagree in regard to the kinship of certain of the branches. For example, the position of the Eskimo is in dispute. It is not practicable to draw distinctions absolutely, but the real characteristic features of most of the races are fairly persistent so that the teacher should find no difficulty in making use of the material as here classified. In this classification weight is given to Kean's *Ethnology,* to which the teacher is referred.

The following observation outline is suggested as useful in the study of the material under this classification. A good way is to place such an outline on the board as a guide to the pupils in using to the best advantage the few moments allotted for each stereograph.

OBSERVATION OUTLINE
FOR PUPILS' STUDY

1. Location—country under observation.
2. Race type seen.
3. Physical features observable.
4. Evidences seen of adaptation.
   - A. In dress.
   - B. In occupation.
   - C. In homes.
   - D. In implements used.
   - E. In industrial processes.

Publishers' Note.

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrating of *Races of Mankind* the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

ETHIOPIAN (BLACK) RACE

MELANESIAN

*1000 A feast day in the Fiji Islands.

NEGRO (AFRICAN)

809 Carrying ivory in the streets of Mombasa, E. Africa.
810 Hunting zebra in East Africa.
*811 Kikuyu women beside village storehouses, E. Africa.
812 The Masai, East Africa.
813 Masai, East Africa.
*816 A village on the slopes of Kilimanjaro, E. Africa.
*817 Picking coffee in Moschi Province, E. Africa.
*818 Safari, East Africa.
823 A river settlement almost on the Equator, Congo Free State.
*833 In the De Beers Diamond Mine, Kimberley, S. Africa.
838 Zulus in their native land.
826 Pigmies of the Congo.

AFRICAN NEGROES IN AMERICA

*149 Negroes collecting turpentine in North Carolina.
*150 Sweating out turpentine in North Carolina.
*160 In a great cotton field in Georgia.
*170 Colored students at Tuskegee Institute, Alabama.
*171 Booker T. Washington at Tuskegee, Alabama.
172 Rapid transit in Mississippi.
179 Shipping cotton—negro laborers in Texas.

AUSTRALIANS

*990 Sons of the old warriors and huntsmen of Australia.

MONGOLIAN (YELLOW) RACE

CHINESE

*929 Mission children at Canton, China.
*931 Rich native bazaars on Nanking Road, Shanghai, China.
*934 In the cultivated bamboo, Nanking.
935 Wheelbarrow transportation, Tientsin.
*943 Bride and groom in Peking.

BURMESE

*908 Handling tons of rice at Rangoon.
911 Buddhist funeral at Mandalay.
916 Natives on the Irrawaddy River.
917 Ruby washing plant at Mogok.

JAPANESE

951 Japanese soldiers at Port Arthur, Manchuria.
954 Lady in jinriksha near Yokohama.
*955 Japanese women gathering millet.
957 Peering into the clouds below Fujiyama.
*960 Street scene in Tokyo.
*961 Under the cherry blossoms, Tokyo.
963 A Japanese hostess.
*964 On the cryptomeria avenue near Nikko.
965 In a yama-kago.
*967 Under the bamboo, Kyoto.
968 A potter and his wheel, Kyoto.
*969 Expert cloisonné workmen at Kyoto.
*970 High-class Japanese family, Kyoto.
*973 Girls picking tea at Uji, Japan.
*977 Gazing into crater of Aso-San.
978 Japanese women coaling a ship.

KOREANS

*980 Building a house in Korea.
*981 Men and boys in school at Seoul.

TURKS

*782 Street in Constantinople.
848 Caravan near Jaffa, Palestine.
*783 Making oriental rugs, Constantinople
784 Expert workmen on oriental rugs.

MONGOLIC PEOPLES OF EASTERN RUSSIA

616 Russian cloth market, Nijni Novgorod.
617 Village of the Tartars, Nijni Novgorod.

LAPPS

*593 A Lapp family in the far North.

(*MALAYAN SUB-RACE*)

JAVANESE

*997 Sudanese children at Garoet.
998 In Botanical Gardens, Buitenzorg.
999 At Boro Boedeor.

FILIPINOS

354 School children in Manila.
*356 A family of Ermita.
*358 Citizens of Panay.
*359 Weaving Pina cloth at Molo.
360 A street scene in Cebu.
362 A Filipino sawmill in Cebu.

AMERICAN (RED) RACE

ESKIMO

390 Interior of Fort Magnesia at Cape Sabine.
*393 Eskimo belles and their garb—Cape York, Greenland.
*395 Eskimo in their summer tents, Greenland.

INDIANS OF THE UNITED STATES

*192 Sac and Fox Indians in Oklahoma.
*194 Sioux Indians in Nebraska.
*261 Wolpi, a mesa village of Hopi Indians, Arizona.
*262 Typical desert home of the Navajo Indians, Arizona.
*263 Home duties of the Hopi man, Oraibi, Arizona.
*264 Hopi Indian weaving blanket, Wolpi, Arizona.
*269 Primitive inhabitants of Cañon Diablo, Arizona.

ALASKAN INDIANS

*316 Indian village of Kasaan.

ISTHMIAN INDIANS

*331 Indians on the Chagres River.
*412 Home occupations of Indians, Tehuantepec.
415 Mexican Indians at Monterey.

SOUTH AMERICAN INDIANS

*461 Traveling in the Andes.
*464 Ice dealers of Quito, Ecuador.
*473 Indian driver of a pack train of llamas, Cerro de Pasco, Peru.
*475 Women water-carriers in the mining country near Lake Paparcocha.

CAUCASIAN (WHITE) RACE

PEOPLES OF ARYAN SPEECH

TEUTONIC GROUP

Germany and Austria

*626 Women at work in a beet field in Germany.
627 German women in Sonneburg.
*628 German women at work in a shoe factory.
*629 German men at work in a shoe factory.
637 German children on the Rhine near Coblenz.
*756 School children of Val Ampezzo.
*758 An Austrian hamlet, Val Ampezzo.

England and South Africa

*505 Coronation scene in England.
*506 Governors of an Empire—Hon. Joseph Chamberlain and Colonial officials, London.
*509 On the Thames near Windsor Castle.
516 Hunting scene in England.
*521 In the Royal Porcelain works at Worcester.
523 Turning and trimming in Royal Porcelain works, Worcester.
*524 Little English boys at Ludlow.
*526 Little English girls of Shottery.
834 Sorting diamonds at Kimberley.

Holland

*642 Holland peasant women on dike road near Dordrecht.
643 Dutch matron of Enkhuysen.
*644 Village girls of Marken.
*645 Country women of Goes.

Belgium

*649 By the River Scheldt at Antwerp.

Switzerland

*704 A street in Berne.
*705 On the summit of Mt. Scheldegg.
706 Maidens on a country road in Switzerland.
*707 Youth and maiden beauty in Switzerland.
*710 A Swiss guide on Mt. Eggishorn.
*724 In the beautiful Chamonix Valley.

SCANDINAVIAN GROUP

Norway

*572 Waving good-byes to the emigrants starting for America, Christiania.
*578 A farmer's family near Roldal.
580 A mother and her daughter at Odde.
*584 Overlooking Bergen.
*589 Mountain guides near the Brigsdal Glacier.
*591 Among the mountains and chasms of ice in the Brigsdal Glacier.
*594 A bride and groom and their friends in Norway.

Sweden

*600 Dalecarlian maidens near Rattvik.
*601 A farmer's family near Lerdal.
*602 Happy crowds at the Spring Festival in Jonkoping.

Denmark

606 Packing prize butter at Hasley.

CELTIC GROUP

Ireland

*555 Over beautiful Enniskerry to Sugar Loaf Mt. near Dublin.
*557 In the linen-bleaching fields.
*558 Hatcheling flax, Belfast.
*567 Digging peat near Kiltoom.

Scotland

*542 The Highland kilt.

Wales

535 Children of Conway, Wales.

Brittany

*669 Interior of a Breton home at Crach.
670 Where the Atlantic beats on the rock-bound coast of Finisterre.
671 Autumn in Brittany.
*672 On the beach at Dieppe.

GRÆCO-LATIN GROUP

Greece

*761 Athenian policeman on Mt. Lykabettos, Athens.
762 On the Museum Hill in Athens.
769 A typical modern Corinthian.
*771 People of modern Sparta.
774 On the battlefield of Thermopylæ.

Italy

*731 Italian boy near Vesuvius, Italy.
*734 Modern Italian youth in the Carrara marble quarries.
*740 Gondoliers of Venice.
*743 Boys and men of Palermo, Sicily.
*744 Picking lemons in Sicily.
745 Near modern Syracuse, Sicily.
746 Overlooking Catania, Sicily.
*747 Typical youth of Sicily.

Spain

674 Harvesting wheat in Northern Spain.
677 In old Madrid.

*679 In Valencia.
*680 Water seller of Valencia.
*683 Scraping cork bark in Almoraima.
*686 Picking dates at Elche.
688 At a bull fight at Seville.
*691 Picking grapes at Malaga.
*692 At Gibraltar.

SLAVONIC GROUP

Russia

*609 Making hay in Russia.
611 In Peterhof Park, Russia.
*618 Country people in Russia.

AMERICAN PEOPLES OF MIXED BLOOD; ANGLO-AMERICAN

United States

14 Down East Yankee on the Reef of Norman's Woe, Cape Ann, Mass.
*15 In a shoe factory at Lynn, Mass.
17 Sorting wool in Massachusetts.
21 Textile workers in Massachusetts.
*22 Expert workmen in big woolen mill in Massachusetts.
*56 Old soldier at Washington's Headquarters, Newburgh, N. Y.
*77 Autumn on Niagara's precipitous banks.
*86 Milking time at Fairfield, N. J.
*88 Filling the bottles at the Fairfield Dairy, N. J.
92 to 104 (of which 8 are starred) In the Paterson Silk Mills, New Jersey.
*107 An old soldier at Gettysburg, Pennsylvania.
133 Chief Justice Fuller administering the oath to President McKinley.
*138 Wilson and his cabinet.

139 New Year's Reception in Washington—Officers of the Navy.
140 Printing U. S. money, Washington, D. C.
*171 Notable guests of Booker T. Washington.
184 On Lookout Mountain, Tenn.
227 Mining with steam shovels at Hibbing, Minn.

AMERICAN PEOPLES OF MIXED BLOOD; LATIN-AMERICANS

West Indies

*321 School children of Porto Rico.
*323 Amidst the charms of Porto Rico.
*428 Typical Cuban home at Remedios, Cuba.

Mexico

399 A hat store in the city of Mexico.
401 Gathering mango fruit, Cuernavaca.
402 Overlooking Amecameca.
*404 Extracting pulque from the maguey plant, San Juan, Teotihaucan.
406 Making jute bags near Orizaba.
409 The public washery.

Panama

329 Native life in Panama.

Colombia

449 People of Barranquilla.
*450 People of Barranquilla.

Ecuador

*456 A schoolroom full of boys at Guayaquil.
*457 Curing the cocoa beans at La Clementina.
*459 Up-country hospitality among the natives, Riobamba.

Peru

477 On the road to Arequipa.
*478 Over Arequipa.

PEOPLES OF SEMITIC SPEECH

Palestine and Syria

*844 Bazaar of Jaffa, Palestine.
845 Plowing in Palestine.
*851 Women grinding at the mill in Palestine.
853 Life on the shore of Galilee.
*858 The inner court of a Damascus home.
*860 Swordmakers of Damascus.
*861 Making bread in the court of a Syrian home.
*862 Churning butter in a big tent, Syria.
*863 Bedouins in Syria.
*864 Feeding silk worms in Syria.
*866 Deadening silk worms in Syria.
867 Purchasing silk cocoons for export, Syria.
868 In a great silk reeling plant, Syria.
*869 Employees of a silk reeling plant, Syria.
*870 Silk workers in a Syrian silk plant.
*871 A skilled Arab silk weaver at his loom.

Mesopotamia

873 On the ruins of Babylon in Euphrates Valley.
*874 In the traditional "Garden of Eden," Euphrates Valley.
*875 Irrigation on the Euphrates River.
878 Loading sacks of wool on to keleks on the Tigris River.
879 Making bricks near Nineveh.
*880 Building "kufas" (round boats) on Tigris River.
*881 People of Bagdad on the Tigris River.

PEOPLES OF (FUNDAMENTALLY) HAMITIC SPEECH

Egypt

787 A crowded street in Cairo.
788 Ladies of modern Cairo.
794 Inside the Great Pyramid of Gizeh.
*799 On the banks of the Nile.
*801 At the first cataract of the Nile.

Algeria

808 A typical market in Algiers.

POLYNESIANS

New Zealand

993 Girls of the old Maori race.

Samoa

*348 A home in Samoa.

Hawaii

*343 'Neath the ferns and palms in Waikiki.

OTHER CAUCASIC PEOPLES

India

*884 Schoolboys of Amritsar.
*886 Home life in Cashmere.
*887 Shawl weavers of Cashmere.
888 Inflating bullock skins on River Sutlej.
889 20-woman team on Darjeeling highway.
890 Bhutanese milkmen at Darjeeling.
893 Water carriers at Calcutta.
894 Watching a street showman at Calcutta.
*897 Among the aerial roots of a banyan tree, Calcutta.

*904 In the great Durbar procession at Delhi.
905 How beauty takes the air at Ulwar.
*507 Indian soldiers at the Coronation of the King of England, in London.

Ceylon

918 Native goldsmiths at Kandy.
919 Grinding moonstones at Kandy.
*920 Harvesting rice in Ceylon.
*921 In interior Ceylon.
*922 Coolies picking coffee in Ceylon.

SCHOOLROOM DECORATIONS

The publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

TOPICS FOR THE GRADES

BY

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968 STEREOGRAPHS OR SLIDES WITH 1,948 REFERENCES TO THEM

The list of suggested stereographs or slides, itemized herewith, has been chosen with a view of helping teachers who are teaching geography from the usual text, and who wish quickly to come in touch with extra illustrative material that will give vividness and efficiency to the classroom practice beyond that possible in any text-book or supplementary reader.

Unless the selection of stereographs or slides is especially complete, they should not in general be used to give pupils their first information on a given topic. They find their best use as a means of testing and amplifying the knowledge already gained from the study of maps and text, or as extra illustrations.

Under each country and subdivision the stereographs or slides have been arranged by number under a group of headings found in most school geographies, making it possible, therefore, for teachers quickly to refer to the numbers they wish. The topics selected are not sufficiently inclusive to cover all courses of study or text, but they include those found common to the leading school geographies. It is believed that the wise use of few illustrations is much more satisfactory in result, less time-consuming, and less distracting, than the use of many illustrations so quickly passed before the eyes as to leave no clear impression.

Publishers' Note.

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the lantern slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

AFRICA

Animals, 810, 819, 820, 827.
Occupations, 813.
People, 809, 810, *811, 812, *816.
Scenery, *785, *814, *818, *821.
Vegetation, *818, 825.

ALGERIA

Cities, *805, 806, *807.
People, 808.
Commerce, 806.

CONGO

Cities, *822.
People, 823, *824, 825, 826.
Scenery, *822, *824, 825.

EAST AFRICA

People, 809, 810, *811, 812, 813, *815, *816, *817.
Products, 809, *817.
Scenery, 810, 813, *814, *817, *818, *821.

EGYPT

Cities, *786.
Occupations, 798, *799.
People, 787, *797, *801.
Scenery, 788, *789, 792, 793, *796, 802.
Scenes of Interest, 790, 791, 794, *795, 800, 802, *803, 804.

SOUTH AFRICA

Cities, *829, *830.
Occupations, *831, *833, 834.
People, *833, 838.
Products, *833, 837.
Scenery, *828, *829, *831, *832.

AMERICA—NORTH

THE ARCTIC

Occupations, *396, 397.
People, 390, 392, *393, *395.
Scenery, *389, *394, *396.

CANADA

Cities, *369, 370, *371, 372, *375.
Commerce, 388.

Occupations, *376, *377, *378, *386, *387.
Products, *376, 385, *386.
Scenery, *364, *366, 367, *368, 373, 374, 379, *380, *381, 382, *383, *384.
Scenes of Interest, *365.

CENTRAL AMERICA

CONSTRUCTION OF PANAMA CANAL

327, 333 to *340 (4 are starred).

COSTA RICA

Occupations, 418, *419.
Products, *417, 418, *419, *420.
Scenery, *417, *420.

PANAMA

Cities, 328.
People, 329, *331.
Products, 329, *331.
Scenery, *330, *331, *332, 333.

MEXICO

Cities, *398, 402, 413.
Occupations, 399, 401, *404, 405, 406, *407, *408, 409, *414, 415, *416.
People, 399, *404, 405, *408, 409, *412, 415, *416.
Products, 401, *404, 405, *407, *411.
Scenery, 402, *403, 413.
Scenes of Interest, *400, 410.

THE UNITED STATES

NEW ENGLAND STATES

Cities, *3.
Natural Resources, *28.
Occupations, 12, 13, *15, *16, 17, *18, *19, *20, 21, *22, 23, *24, *28.
Scenery, *10, 11, 14, *27.
Scenes of Interest, 1, *2, *3, *4, *5, 6, *7, 8, 9, 26.

MIDDLE ATLANTIC STATES

Cities, *29 to *43 (9 are starred), and *128 to *132.
Immigration, *45, 46, *47.
Natural Resources, *109, *127.
Occupations, *43, 59, *66, *67, 68, *78, 81, 85, *86 to 105 (13 are starred), *109 to 116 (6 are starred), *119, 120, *121.
Scenery, *29, *48, *54, 55, *57, *61, 62, 65, *69 to *72 (3 starred), 74 to *77 (2 are starred), *80, *83, *107, *108, *117, *128.
Scenes of Interest, *30 to 52 (14 starred), 55, *56, 58, *79, 106, *107, *128 to 139 (8 are starred), 140.

SOUTH ATLANTIC STATES

Natural Resources, *149.
Occupations, *149, *150, *151, *154, 155, *156, *157, *158, *160, 161, *166.
Products, *149, *150, *151, *159, *160, *167, *168.
Scenery, 146, 147, *148, *149, 152, *153, 163, *164, *165, *166, *167.
Scenes of Interest, *171, 172.

GULF STATES

Occupations, *170, *177, *178, 179, *181, *182, 183.
Products, *173, *180, 183.

Scenery, *170, 175, 176, *182.
Scenes of Interest, *171, 172.

CENTRAL WESTERN AND GREAT LAKE STATES

Cities, *189, *212.
Natural Resources, *204, *219, 224, *226, 227, 230.
Occupations, *196, 197, *198, *200, *210, *211, *214, *215, *216, *218, *219, *220, *221, *222, 224, 227, *228, *229, 230, *231, *232, *234.
Products, *193, *195, *200, *201, *203, 205, *210, *213, *214, 217, *218, *219, *222, 224, *225, *228, *231, *234.
Scenery, *193, *201, 202, *203, *206, *216, 217, *226.
Scenes of Interest, 184, 185, *187, 190, *192, *194, *206, 207, *226, *233.

ROCKY MOUNTAIN STATES

Cities, 256.
Occupations, *249, *257, 258, *259, *263, *264, *267, 268.
Products, *249, *257, *259, *267.
Scenery, 235 to *243 (5 are starred) Yellowstone Park, 244 to 255 (7 are starred), *265, *266, *269 to *278 (7 are starred).
Scenes of Interest, *254, 255 (Mesa Verde), *261 to *264, *271, *272.

PACIFIC COAST STATES

Natural Resources, *294, *304, *306.
Occupations, *280, *294, 295, *297, 298, *299, 300, *303, *304, *306, *307, 308, *309, 310.
Products, *280, *281, *283, *294, 298, *304, *307, *309, 310.
Scenery, *279, *282, *286, *288 to *292 (3 are starred) Yosemite, *301 Crater Lake, 302 Mt. Hood, *309, *311 to *314 Mt. Tacoma, *315.
Scenes of Interest, *284, 285.

POSSESSIONS OF THE UNITED STATES

ALASKA

Cities, 317.
People, *316.
Products, *319.
Scenery, *318.

HAWAII

Cities, 341, *342.
Occupations, *344.
Products, *343, *344.
Scenery, 341, 345, *347.

PANAMA

Cities, 328.
Scenery, *330, *331, *332, 333.
People, 329, *331.
Products, 329, *331.
The Canal, 327, 333 to *340 (4 are starred).

PHILIPPINE ISLANDS

Cities, *349, 350, *351.
Scenery, 353, *357, 361.
Occupations, *355, *357, *359, *361, 362.
People, 354, *356, *358, *359, 360, 362, *363.
Products, *357, *361, *363.
Transportation, 350, *358, *363.
Scenes of Interest, *352, 353.

PORTO RICO

Cities, *320, 322, *325.
Occupations, *323, 324.
People, *321, 322, *323, 324.
Products, *323, 324.
Scenery, *323, 326.

SAMOA

People, *348.

WEST INDIES

CUBA

Cities, *421.
Occupations, *430, *431, *432.
People, *426, *428, *432.
Products, *430, *431.
Scenery, *423, 424, *427, 429.

JAMAICA

Occupations, *434, *435.
Products, 433, *434, *435.

MARTINIQUE

Cities, *437.
Scenes of Interest, *436, *438, 439.

AMERICA—SOUTH

ARGENTINE

Cities, *488, *489.
Scenery, *487, *490, 491.

BRAZIL

Cities, *451, *452, 453, *454, 455.
Products, 455.
Scenery, *451.

CHILI

Scenery, 485, *486.
Scenes of Interest, *486.

COLOMBIA

Cities, *447, 448.
People, 449, *450.
Scenery, *447.

ECUADOR

Cities, *463.
Occupations, *457, *460, *464.
People, *456, *458, *459, *461, *464.
Products, *457.
Scenery, *460, *461, 463, *464, 465.
Scenes of Interest, 462.

PERU

Cities, *466, *478, 484.
Occupations, 467, *468, *469, *470, 474.
People, 474, *475, 477, 481.
Products, 467, *468, *470, 474, 483.
Scenery, *466, *468, *469, *470, 471, *472, *476, 477, 479, 480, 481, *483, 484.
Scenes of Interest, *482.

URUGUAY

Cities, *492, *493, *494.

VENEZUELA

Cities, *440, *442.
People, 441, *442, *443.
Products, 445, 446.
Scenery, *440, *444.
Scenes of Interest, 441.

EUROPE

AUSTRIA

Cities, 750, *751, *752, *760.
People, *756, *758.
Scenery, 750, *756, 757, *758, 759, *760.
Scenes of Interest, 753, 754, *755.

BELGIUM

Cities, *647, *649.
Occupations, *650, *651.
Products, *650, *651.

BRITISH ISLES

ENGLAND

Cathedrals, *504, *512, *529.
Cities, *496, 500, *501, 508, *517, 532.
Commerce, *495, *496.
Government, *502, 503, *506.
Harbors, *495.
Homes, 515, *517, *525, *526, 530, 532.
Occupations, *519, *520, *521, *522, 523, *527, 528.
People, *505, *506, *509, 510, *514, 516, *524, *526.
Products, *519.
Sports and Recreations, 510, *514, 516.
Scenery, 510, *513, *514, *518, *524.
Scenes of Interest, 497, *498, *505, *507, *509, *512, *517, *525, *526, 530, 531.

IRELAND

Cities, *554, *556, *561.
Harbors, *554, *560.
Occupations, *557, *558, *559, *560, *566, *567.
People, *555, *558, *566, *567, *569.

Products, *557, *558, *567.
Scenery, *554, *555, *562, 563, 564, 565, *566, *570, *571.
Scenes of Interest, *560.

SCOTLAND

Cities, *537, *538.
Occupations, *543, 544.
Products, *543, 544, 545.
Scenery, 539, 541, *543, *547, *548, *549, 550, 551, 552, *553.
Scenes of Interest, *540, *542, *546, *547.

WALES

Scenery, 536.
Scenes of Interest, 535.

DENMARK

Cities, *604, *605.
Occupations, 606.
Products, 606.

FRANCE

Cathedrals, *656, *659, 662, *663.
Cities, *654, *655, *656, *657, *665, 666.
Harbors, 666.
Occupations, 652, 658, *661, 664, *668, 671.
People, 652, *668, *669, 670, 671.
Products, 658, *661, *668.
Scenery, 652, *661, 664, *665, 666, *667, 670, *672.
Scenes of Interest, *653, *654, *656, *657, 660, *663, 664.

GERMANY

Castles, *621, *632, *635, 637.
Cathedrals, *638.
Cities, *621, 622, 623, *634, *638.
Commerce, *624.
Occupations, *626, 627, *628, *629, 630.

Products, *626, 627, *629.
Scenery, *624, *631, *632, *633, *634, *635, 636, 637.
Scenes of Interest, *625.

GREECE

Cities, *761, *765, *766.
People, *761, 769, *771, 774.
Scenery, *761, *768, 770, *771, 772, 773, 774, 775, *776.
Scenes of Interest, 762, 763, *764, *765, *766, *767, 770.

HOLLAND

Cities, *639, *640.
Occupations, *642, *645, *646.
People, *642, 643, *644, *645.
Products, *642, *645, *646.
Scenery, *642, *646.
Scenes of Interest, 641.

ITALY

Cathedrals, *736, 737, *738, 739.
Cities, 725, *726, *730, 733, *736, 737, *740, 741, 746, 748.
Occupations, *734, 735, *743, *744.
People, *734, *743, *744, 745.
Products, *734, 735, *743, *744.
Ruins, 725, *726, *728, *729, 732, 745, *749.
Scenery, *730, *731, 733, *740, 745, 746, *747.
Scenes of Interest, 727, *728, *729, 732.

MADEIRA ISLANDS

People, 696.

MONACO

City, 673.

NORWAY

Cities, *573, *584.
Commerce, *572.
Glaciers, 583, *586, *587, *589, *590, *591.

Occupations, *578.
People, *572, 575, *578, 580, *593, *594.
Products, *578, *582.
Scenery, 575, *576, *577, *579, 580, 581, *582, 583, *584, *585, *586, *587, 588, *589, *592, *595.
Scenes of Interest, 574.

PORTUGAL

Cities, 693.
Scenes of Interest, 694, 695.

RUSSIA

Cities, *607, *608, *613.
Occupations, *609, 617, *620.
People, *609, 611, 616, *618.
Products, 617, *620.
Scenery, *613, 617, 619, *620.
Scenes of Interest, 614, 615.

SPAIN

Cities, 677, 678, *684, *687, 689.
Harbors, *687.
Occupations, 674, *679, *681, 682, *683, *686, 690, *691.
People, 674, *680, *686, *691.
Products, *681, 682, *683, *686, 690, *691.
Scenery, 674, *684, *692.
Scenes of Interest, 675, *685, *692.

SWEDEN

Cities, *596, 597, *598.
Occupations, *601.
People, *600, *601, *602.
Scenery, *600, 603.
Scenes of Interest, 599.

SWITZERLAND

Cities, *698, 703, *704.
Glaciers, *700, *705, *710, 711, 712, 714, 717, 718, *719, 720, *721, 722, 723.
Homes, 706, *724.
People, 706, *707, *724.
Scenery, 697, *700, *701, 702, 703, *705, 706, 708, 709, *710, 711, *713, 714, 716, 717, 718, *719, 720, *724.
Scenes of Interest, *699, 715.

TURKEY—EUROPEAN

(See also Turkey in Asia.)

Cities, *777, 778.
Commerce, *777.
Occupations, *783, 784.
People, *782, *783, 784.
Products, 784.
Scenery, 780, *781.
Scenes of Interest, 779.

ASIA

ASIATIC TURKEY

ASIA MINOR

Cities, 839.

MESOPOTAMIA

Cities, *881, 882.
Occupations, *875, 878, 879, *880.
People, *880, *881.
Products, *874, 878.
Scenery, *874, *876, 877.
Scenes of Interest, 873, 877, *881.
Transportation, *881, 882.
Vegetation, *874, 877.

PALESTINE AND SYRIA

Cities, *844, 846, 847, *857.
Occupations, 845, *851, 853, *860, *861, *862, *864, *865, 868 to *871 (3 are starred).
People, *844, 845, 846, 848, 850, *851, 853, *858, *860, *861, *862, *866, 867, *869, *871.
Products, *860, *864, *865, 867, *870, *871.
Scenery, 845, 849, 850, 852, 854, *855, *863, 867, 872.
Scenes of Interest, 856, *857, 872.
Transportation, 848, *859, 867.

SINAI PENINSULA

Scenery, 840, 841, *842.
Scenes of Interest, 840, *842.

CEYLON

Animals, 923 to *926 (2 are starred).
Occupations, 918, 919, *920, *922, *924.
People, 918, *921, *922.
Products, 919, *920, *922.
Scenery, *921, 923, *924, 925.
Vegetation, *920, *921, *922.

CHINA

Cities, *928, 930, *931, 937, *938, 939, 940, 941.
Harbors, 927, 930.
Occupations, *932, 933, 935.
People, *929, *931, 933, 935, *943.
Products, *932, *934.
Scenery, 927, 936, 940.
Scenes of Interest, 937, 941, 942.
Transportation, 933, 935, 936, *938.

INDIA (including Burma)

Animals, 894, *895, 896, 907, 914.
Cities, *883, 892, *895, 898, *906.
Occupations, *886, *887, 888, 889, 890, 893, 907, *912, 914, *915, 917.
People, *884, *886, *887, 888, 889, 894, *897, *903, 905, 911, *912, 914, 916.
Products, *886, *887, 907, *912, *915, 916.
Religious Life, *884, *895, 898, *899, 902, *903, 909, 911.
Scenery, *885, *891, *910, *912, 913, 914.
Scenes of Interest, *883, 890, *899, 900, 901, *904.
Transportation, *883, 888, 890, 902, *904, 905, 907, 914, 916.
Vegetation, *885, *897, 913.

JAPAN

Cities, 959, *960, *961.
Occupations, *955, 968, *969, *971, *972, *973, *974, *975, 978.
People, *955, *960, *961, 965, *967, *969, *970, *973, *977.
Products, *955, *967, *972, *973, *974.
Scenery, 954, *956, 958, *966, *967, *970, *975, 976, *977.
Scenes of Interest, *966.
Transportation, 954, *960, *964, 965, *967.
Vegetation, *955, *961, *964, *967, *970, *975.

KOREA

Cities, 979.
People, *980, *981.

MANCHURIA

Cities, 951.
Harbors, *946, 951.
People, *944.
Scenery, *944, *946, 947, 949, 951.
Scenes of Interest, *944, *946 to 953 (3 are starred).
Transportation, 945.

OCEANIA

AUSTRALASIA

Cities, *982, *983, 988, 989.
Occupations, *985, *987, 988, 991, *992.
People, *990, 993.
Products, 986, 988, 991, *992.
Scenery, *982, *987, *994, 995, 996.
Animals, 984.

FIJI ISLANDS

People, *1,000.

JAVA

People, *997, 998.
Scenes of Interest, 999.

OTHER TOPICS FOR THE GRADES

Alluvial Fans, *586, *716.
Beaches, *61, *164, *514, 541, *665, *672.
Canals, *206, 207, *208, *577, *624, *640, 641, 741, *742, 769, *785.
Canyons, 242, *243, 255, *269, *274, 275, *288, 471, 772.
Capes, *391, *518, *595, *828.
Caves, 73, 147, *148, 276.
Cities, *30, *129, *130, *131, *189, *212, *342, *421.
(See classification "Cities and City Life")

Cliffs, *80, 289, *368, *513, *518, 541, 565, *570, *595, *747, 954.
Coasts, 14, 82, *394, 424, *476, *513, *518, *562, 565, *570, 670, *692, 733, 954.
Clouds, *238, *241, *245, 251, *586, *956, 958.
Commerce, *29, *31, *33, *42, *61, *173, *188, *233, *234, *315, 388, 445, *495, *554, *560, *572, *624, *649, 666, *785, 978.
Climate
Altitude, *245, *246, 300 (see effects of altitude in classification on "Zone Life").
Deserts, *262, *273, 793, *796, 849, *863.
Divides, 251, *483, *700.
Dunes, *10, 11, 793.
Earthquake, *284, 285, *749.
Estuaries, *29, *33, 35, *48.
Falls, *25, 65, *69, 70, *71, *72, 73, 75, *226, 242, *576, 581, 588, *814, *821.
Fjords, *579, 580, *585.
Floods, 118, 176, 190, *876.
Forests, 630, 825, *964.
Geysers (see Hot Springs).
Glaciers, *49, 302, *312, *313, *314, *384, *582, *586, *589, *590, *591, *667, *700, *705, *710, 711, 712, 714, 718, *719, 720, *721, 722, 723, 759, *891, 996.

Gorges, 65, *72, *76, *77, *250, *252, 536, *576, 708, 913.

Harbors, *29, *31, *33, *315, *349, *364, *366, *451, *492, *554, *560, *572, *604, *644, *649, 666, *687, *730, *777, 927, *928, 930, *946.

Heat Belts—cold cap, *389, *391, *394, 397, *593, *595.

Hot Belt, *343, *344, *348, *356, *411, *419, *420, *421, *430, 433, *434, 810, *816, *897, 923, 925.

Temperate Zone, 142, *149, *166, *180, *182, *193, *280, *297, *299, *309, 310, *526, 552, *578, *646, *650, *681, *691, *961.

Hills, *309, *366, *427, *524, *566, *661, 664, 674, *831, *832, 947, *948.

Homes, 172, *192, *262, *325, *348, *356, *395, *412, *458, *459, *526, *569, *592, *593, *594, *618, 706, *771, *816, *858, 963, *980. (See Classification "Homes and Life of the People")

Hot Springs, *237, 240, *241, *994, 995.

Icebergs, *318, *389, *391, *394, *396.

Irrigation, *182, *303, *357, *469, 675, 695, *797, *798, *803, *875, 933, *972.

Islands, *69, 74, *165, *301, *332, 367, 373, *451, *553, *571, 802, *994.

Lakes, 202, *301, *381, *475, 481, 551, *571, 583, *586, *587, 619, *631, *716, 757, 850, 854.
Mountains, *27, 184, 244, *245, *246, 251, *252, *270, *292, 302, *311.
(See Mountains in classification on "Physical Geography")
Oases, 841, *842.
Oceans, *61, 62, *83, 145, *286, 353, 367, *476, 485, *514, *518, 541, *562, *828, 954.
Occupations.
Agriculture (see classification on "Agriculture").
Dairying (see classification on "Products and Industries," page 74).
Fishing (see classification on "Products and Industries," page 75).
Grazing, *201, 217, *218, *257, 258, *483, *543, 544, *547, *582, *646, 664, 757, *831.
Lumbering (see classification on "Products and Industries," page 85).
Manufacturing (see classification on "Products and Industries").
Mining (see classification on "Products and Industries," pages 81 to 83).
Quarrying, *28, *734, 735.
Peaks, *246, 300, 302, *311, *403, *460, *698, *705, *713.
People.
Black, *170, 172, *801, *816, 823, 825, 838, *990, *1,000.
Malay, *348, *356, 993, *997.
Red, *192, *194, *263, *264, *393, *395, *464.
Yellow, *593, *929, *943, *960, 968, *970.

Plains, 59, *128, *170, *193, *257, 258, *262.
(See classification on "Physical Geography" pages 47, 48, 49)
Plateaus, 255, 277, *278.
Promontories, *451, *513, *562, 670, 673, *692, *828.
Rapids, 74, *76, 374, 603, 697, *855.
Rivers and River Valleys.
(See classification on "Physical Geography" pages 41 to 43)
Roads, 26, *166, 235, *253, *273, *282, *576, *756, 889.
Rolling Country, *543.
Shores, 424, *513, 565, *572, 670, *716, 854, 954.
Straits, *486, *747, 780, *781.
Transportation (see classification on "Transportation").
Valleys (see classification on "Physical Geography" pages 44 to 47).
Volcanoes, *271, *272, *301, *311, 341, 345, *346, *347, *436, *437, 439, 479, 480, *730, *731, 746, *956, 958, 976, *977.
Water Gaps, *108.
Waves, 62, 353, *476, *518, *570, *828.
Winter Resorts, *164, *169, *665, 666.

SCHOOLROOM DECORATIONS

The Publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

TRANSPORTATION

EDITED BY

W. M. GREGORY,

PROFESSOR OF GEOGRAPHY, NORMAL TRAINING SCHOOL, CLEVELAND, OHIO.

381 STEREOGRAPHS OR SLIDES WITH 447 REFERENCES TO THEM.

The following stereographs or slides are arranged for the study of Transportation in all parts of the world. In this collection all methods of transportation are clearly illustrated. The teacher can give definite lessons upon the kind of transportation employed in any country, or using the journey method may visit the important rivers, great harbors, etc. The use of animal carriers includes all of the beasts of burden from the Arabian horse to the Indian elephant. Canals and locks, docks and bridges are some of the illustrations of the many aids to transportation. The evolution of transportation from the head bearers and animal carriers to the modern steam and electric trains is emphasized and the material is arranged under the appropriate topics so as to be most easily accessible for use. The teacher has a wide choice of material, as under many of

the groups there are from 4 to 12 views on one subject, i.e., Elephants—four excellent views of the elephant in action; Camels—thirteen typical views of the ship of the desert, and under burros—14 clear views of the faithful little donkey.

It is obvious that the arrangement of the views is such as to afford the teachers an opportunity to give excellent and effective lessons in commerce and transportation with the least loss of time in arranging concrete illustrations for the pupils' use.

The following outline will aid the teacher in making the lesson definite and help each pupil to make the very best use of his time for the study of each stereograph in any lesson on *transportation*. A good way is to place the outline on the board before the class and draw attention to it at the beginning of the lesson.

OUTLINE FOR DIRECTING THE PUPILS' STUDY

1. **Location.**
2. **Kind.**
3. **Purpose, what transported.**
4. **How extensively used?**
5. **Modern or primitive?**
6. **Similar or not to what you are accustomed?**
7. **If dissimilar, why used here?**

The numbers refer to the serial numbers in the upper right-hand corners of the stereographs and on

the slides. The numbers starred are included in the special 600 series.

(NOTE.—For a wide variety of additional material on *Transportation*, see our general catalogue.—THE PUBLISHERS.

HUMAN CARRIERS

BURDENS BORNE ON THE BACK AND SHOULDERS, ETC.

*160 Carrying baskets of cotton on the back.
*192 Indian papoose ready to be strapped on its mother's back.
*351 Filipino burden carriers.
405 Fuel vender, Mexico.
413 Water vender in Mexico.
*468 Cotton picking, Peru.
*475 Squaws carrying water from Lake Paparcocha, Peru.
*566 Women carrying grain on the Island of Achill, Ireland.
*618 In the heart of Russia.
*645 Women with pails balanced on wooden yokes, Holland.
*782 In Constantinople.
809 Ivory on the way from the jungle, East Africa.
816 Hunting zebra in East Africa.
823 River settlement near the equator, Congo.
889 20-woman team in India.
893 Water carriers in India.
*908 Freight handlers and tons of rice, Rangoon, Burma.
*932 Coolies unloading tea at Hankow, China.
957 By the crater of Mount Fuji, China.
*960 Burden bearers of Japan—Tokyo.
*973 Girls picking tea in Japan.
978 Women coaling Pacific steamer, Nagasaki, Japan.

BURDENS BORNE ON THE HEAD

*681 In a cork oak grove in Spain.
787 On a street in Cairo, Egypt.

*811 Kikuyu women with water vessels, East Africa.
*817 Picking coffee in East Africa.
*818 Forest trail in East Africa.
825 A forest trail in the Congo.
846 On Christian Street, Jerusalem.
*920 Harvesting rice in Ceylon.

LITTERS, CHAIRS AND RICKSHAWS

82 Wheel chairs at Atlantic City, N. J.
*169 Wheel chairs at Palm Beach, Fla.
690 In the salt fields near Cadiz, Spain.
*931 Principal Chinese street of Shanghai, China.
954 Rickshaws near Yokohama, Japan.
*964 Rickshaws in the cryptomeria avenue, near Nikko, Japan.
965 A Japanese lady in a yama-kago, Japan.
*967 Rickshaws under the bamboo trees, Japan.

TRUCKS, CARTS AND WHEELBARROWS

179 Shipping cotton, Texas.
*758 An Austrian hamlet.
935 Wheelbarrow transportation in Tientsin, China.
*961 Baby carriage, Japan.

USE OF ANIMALS

USE OF HORSES

(*Farm and Draft Horses*)
*181 Cutting rice in Texas.
*188 On a bustling levee at St. Louis.
*200 20th Century harvester.
*216 Ploughing on the prairie of Illinois.
*225 In a great lumber yard.
*306 Seining salmon in Columbia River.
*527 Drawing hay in England (showing hayrack).

*557 Cart horse at linen mills.
671 Horses used in threshing grain, France.
*875 Raising water from the Tigris River, Mesopotamia.
882 Drawing horse cars in Bagdad, Mesopotamia.

(*Saddle Horses*)

183 A saddle horse in Texas.
*194 Indian braves in the saddle.
*257 Cowboys on the prairie of Arizona.
*259 Cowboys examining the brand of a yearling.
*293 U. S. Cavalry horses.
*676 Military horses in Madrid, Spain.
677 Mounted soldiers at Madrid, Spain.
772 Saddle horses in Langada Pass, Greece.
*830 South African Light Horse—at Cape Town.
*835 British Mounted Battery in South Africa.
850 Arabian horses by the Dead Sea, Palestine.
867 Arabian horses near Beyrout, Syria.
941 Allied armies entering the Sacred Gate at Peking, China.

(*Road Horses*)

26 Horse and carriage on country road in New Hampshire.
*79 Horses hitched to cutter (sleigh), Prospect Park, Niagara Falls.
84 Children and pony cart in a field of daisies.
235 Six-horse tally-ho at Gardiner, Montana.
*253 Stage-coach in Rocky Mountains, Colorado.
*282 Driving horse, California.
*365 Driving in Arcadia.
*496 London "cabbies."
500 Double-decked omnibus, London.
*505 Coronation Procession in London.
*538 Horse cars, Edinburgh.
*546 Horse and carriage in Scotland.
*555 Horse and Irish jaunting-cart near Dublin, Ireland.
*576 Jaunting-cart, Norway.

611 Royalty driving in Peterhof Park, Russia.
615 Russian carriages, Moscow.
*657 Parisian double-deck horse car.

(*Pack Horses*)

890 Bhutanese milkmen at Darjeeling.
979 A pack train outside of Seoul, Korea.

USE OF MULES

*170 Ploughing at Tuskegee.
*273 Mule wagon in Painted Desert.
*297 Mule team hauling logs in California.
*442 The bread mule in Caracas, Venezuela.
*469 Planting sugar cane on a farm at Santa Clara, Peru.

USE OF BURROS

275 Burros on the Grand View trail.
277 A prospector's outfit on burro's back.
*403 West from Pueblo, Mexico.
*404 Extracting pulque, Mexico.
449 Friendly little beasts of burden in Colombia.
*450 Water sellers and their donkeys in streets of Barranquilla, Colombia.
*461 Traveling in the Andes, Ecuador.
*464 Ice gatherers of Quito, Ecuador.
474 Loading burros with silver ore, Peru.
477 Pack train of donkeys in Peru.
480 Coming down from El Misti, Peru.
565 Irish farm donkey.
*569 Donkeys in farmyard, County Kerry, Ireland.
745 Near modern Syracuse, Sicily.

USE OF DOGS

392 Eskimo dog sleds.
*642 Milk cart passing windmill, Holland.
643 Dutch matron and her dog team, Holland.

*704 Dog and man team, Berne, Switzerland.
*760 Woman and dog in Innsbrück, Tyrol.

USE OF CATTLE

*149 Collecting turpentine.
162 In St. Augustine, Florida.
*166 Eight-ox team hauling logs.
172 Rapid transit in Mississippi.
326 A double ox-team in Porto Rico.
*430 Hauling car-loads of sugar-cane to the mill, Cuba.
*460 Ploughing in Ecuador.
*470 Harvesting sugar-cane, Santa Clara, Peru.
630 Harvesting in Germany.
*679 Cow delivering milk in Valencia, Spain.
696 Ox-sleigh in summer, Madeira Islands.
*734 In the Carrara marble quarries, Italy.
845 Plowing in the fertile plain of Sharon, Palestine.
*883 A bullock cart at the railway station, Bombay.
905 How beauty takes the air in an Indian "reet."

USE OF WATER BUFFALO AND CARABOA

*357 Water buffalo at work in rice field, Luzon, P. I.
*358 Filipino wagons drawn by caraboa.
*363 A load of manila hemp at Cebu, P. I.
914 Hauling timber with buffalo and bullock, Burma.

USE OF LLAMAS

*473 Pack train of llamas, with Indian driver, Peru.
477 Pack train of llamas and donkeys in Peru.

USE OF GOATS

*743 Goats delivering milk in Palermo, Sicily.

USE OF CAMELS

788 A ship of the desert, Egypt.
*789 The road to the Pyramids, Egypt.

790 By the Great Pyramids, Gizeh.
791 Up the corner of the Pyramid.
*795 By the Sphinx and Pyramid.
*842 In the oasis of Elim, Sinai.
*844 Bazaar of Jaffa, Palestine.
845 Plowing with a camel in Palestine.
848 Caravan near Jaffa, Palestine.
852 Joseph's well, Plain of Dothan, Palestine.
*859 Caravan camp at Damascus.
902 Curiously rigged camel wagon at Delhi, India.
*938 Caravan on Legation Street, Peking, China.

USE OF ELEPHANTS

*904 The Great Durbar Pageant, Delhi, India.
907 Elephants piling timber, Rangoon, Burma.
*924 Plowing with elephants, Ceylon.
925 Breaking down timber in stockade, Ceylon.

USE OF REINDEER

*582 Herd of reindeer in Norway.
*593 Lapp home in northern Norway.

USE OF DERRICKS, CRANES, ETC.

*28 In the granite quarry at Concord.
*43 Constructing a skyscraper.
*195 At the Conneaut docks, Ohio.
197 Unloading a lake steamer.
*198 Lowering a five-ton electric clam.
*214 Half mile of pork at Armour's, Chicago.
224 Hauling logs up a slip.
*228 Steam crane at work in mine.
*229 Using a powerful crane.
*334 One of the huge steam shovels used in digging the Panama Canal.

*336 The Miraflores locks, showing cranes, pulleys, etc.
337 Huge traveling crane used at the Gatun Dam in Panama.
*340 The machinery for towing boats through the Panama Canal.
*495 Loading derricks on London docks.
575 Well sweep, Norway.
*915 Oil well in Burma.
988 Gold mine in Victoria, Australia.

LAND TRANSPORTATION

USE OF STEAM

*250 Locomotive and train in Royal Gorge, Colorado.
*265 Train on trestle at copper mines in Arizona.
*269 Passenger train crossing high trestle in Canyon Diablo, Arizona.
298 Log train in California.
491 A train that climbs the Andes.

COG ROADS

*490 Cog road at Los Andes, Argentine.
*699 Cog road up Mt. Pilatus, Switzerland.

USE OF ELECTRICITY

*3 Trolley cars in Boston.
*40 Herald Square, north over Sixth Avenue Elevated Railway.
53 Electric power on the New York, New Haven and Hartford R. R.
*76 Electric line along the Gorge, Niagara Falls.
*78 Where great dynamos generate 5,000 horse-power.
81 Great truck escalator, Bergen Hill, Hoboken.
*111 Electric motor in a coal mine in Pennsylvania.
*212 Trolleys in Chicago.

*342 Electric trolley in Honolulu.
*556 Double-decked trolley in Dublin.
*573 Trolleys in Christiania, Norway.
597 Trolleys in Stockholm.
619 Russian trolley line, Kief.
623 Elevated R. R. in Berlin.
*983 Trolley cars in Melbourne, Australia.

AUTOMOBILES

41 Automobiles on Fifth Avenue, N. Y. City.
*164 Automobiles on beach at Ormond.
*493 Principal street of Montevideo, Uruguay.
499 London's financial center.
508 Regent Street in London.
622 Automobiles, Unter-den-Linden, Berlin.

OTHER INTERESTING FORMS

41 Upper Fifth Avenue, New York City.
*305 Shooting logs down a mountain side.
*351 Principal business street in Manila, P. I.
374 Portage at falls in Muskoka River, Canada.
388 Canadian Pacific R. R. at Vancouver, B. C.
471 Steep grade of R. R. in the Andes Mountains, Peru.
500 Cheapside, London.
*502 On the Thames River.
*509 Rowboats along the Thames at Windsor, England.
528 Gasoline motor propeller plow in England.
*538 Princes Street, Edinburgh, Scotland.
545 Thousands of kegs of herring at Wick, Scotland.
*556 In Dublin, Ireland.
*561 Royal Avenue, Belfast, Ireland.
*607 Nevsky Prospect, St. Petersburg, Russia.
615 In front of Kitai Gorod, Moscow, Russia.
*657 By the Palace of Justice, Paris.
*680 Water seller on daily rounds, Valencia, Spain.
709 Winding road, Italian Alps, Switzerland.

*755 Horse cars, Vienna, Austria.
772 Winding mountain road, Greece.
*797 An Egyptian well-sweep.
882 Double-decked horse car in Bagdad.
911 Elevating coffin in car to shrine, funeral of Buddhist, Burma.
930 Along the Whangpoo River, Shanghai, China.

NAVIGATION

EARLIER TYPES OF BOATS

*316 Indian canoes at Kasaan Village, Alaska.
*331 Indian dugouts on the Chagres River, Panama.
*389 Eskimo kayak in the Arctic Regions.
*824 Dugouts on the Congo.
888 Inflating bullock skins, River Sutlej, India.
916 Timber raft on the Irrawaddy River, Burma.

CURIOUS AND ANTIQUATED TYPES OF BOATS

350 Native boats on the Pasig River, Manila, P. I.
*444 Native dugouts on Lake Maracaibo, Venezuela.
*482 Straw boats on Lake Titicaca.
485 French brig rounding Cape Horn.
574 Old Viking ship.
*631 Sculling on the Konig's See, Germany.
*640 Canal-boats in Amsterdam.
641 Canal-boats for freight in Delftshaven, Holland.
*644 Fishing boats at Marken, Holland.
*740 Venice—a gondola.
741 Gondolas, beneath the Bridge of Sighs, Venice.
*742 On a canal in Venice.
853 Life on the shore of Galilee, Palestine.
*880 Making kufas or round boats, from date-palm branches and rope, on the Tigris River, Mesopotamia.

*881 Curious round boats (kufas) on the Tigris River near Bagdad.
914 On the Irrawaddy River, Burma.
*928 Boat population of Canton, China.
936 Junk flotilla on Pei-ho River, China.
945 Clumsy Chinese junk on Yellow Sea.

MODERN TYPES OF BOATS

*29 In New York Harbor.
*30 On a pleasure steamer.
*48 Warships and pleasure craft on the Hudson River.
*54 Pleasure craft on the Hudson River near West Point.
*61 Life-saving boats and crew.
145 U. S. battleships.
*174 On the wharf at New Orleans.
176 Small steamer stranded.
*187 Typical end-wheeler on the Mississippi.
*304 Stupendous log raft in the Columbia River.
*315 In the harbor at Seattle—ocean steamer.
*349 In Manila Bay, P. I.
362 Ocean steamers at Cebu, P. I.
*364 Ocean liner in Yarmouth Harbor.
373 Amidst the islands of the St. Lawrence.
*391 Peary's ship at Cape Sabine.
*423 Ocean steamship at Santiago, Cuba.
445 Docks on Lake Maracaibo.
510 Rowboats at Henley, England.
*518 End of England at Land's End.
*559 Building an ocean liner, Belfast, Ireland.
*584 Bergen Harbor, Norway.
*585 Steamer in Naerofjord, Norway.
*587 Rowboat on Norwegian lake.
612 The Royal Yacht—Alexandria.
637 Across the Rhine from Coblenz, Germany.
*649 On the Scheldt River, Antwerp.
666 The port of Nice, France.

*687 The Guadalquiver River, Seville, Spain.
*781 In the Bosphorus.
*785 In the Suez Canal.
*805 On a steamer at Algiers.
839 Harbor at Smyrna.
927 Hong-Kong Harbor, China.
*946 In the harbor at Port Arthur.

SAILBOATS

*396 Whalers Diana and Nova Zembla cruising in the Arctic.
397 Whaling in Baffin Bay.
485 French sailing vessel rounding Cape Horn.
545 Herring boats at Wick, Scotland.
*644 Fishing boat at Zuider Zee, Holland.

LAKE STEAMERS

*206 West over locks and vessels in the ship canal.
207 Whaleback freighters of ore.
*208 Down lockage in Sault Ste. Marie.
*215 Loading great whaleback steamers.
*378 Grain vessels loading from grain elevators on Lake Superior.

FERRY-BOATS

*31 East River from bridge, New York City.
*44 Pennsylvania Railroad ferry-boats, New York City.

OCEAN DOCKS

*487 Most costly docks in the Western Hemisphere, Buenos Ayres, S. A.
*492 The docks at Montevideo, Uruguay.
*495 Albert docks on the Thames below London.
*572 Boat leaving docks at Christiania, Norway.
*604 Harbor at Copenhagen, Denmark.

HARBORS AND BAYS

*366 Perce Bay, Perce, Quebec.
367 Famous rocks in Perce Bay.

*423 Santiago Harbor.
*437 Harbor at Island of Martinique.
445 Loading ocean steamer at Maracaibo, Venezuela.
*492 Montevideo, from the harbor.
*554 The harbor at Queenstown, Ireland.
*584 Bergen, Norway.
*604 Harbor at Copenhagen, Denmark.
*649 Antwerp, Belgium.
666 The port of Nice, France.
*687 Seville, Spain.
690 Cadiz, Spain.
*730 Harbor of Naples.
748 Messina Harbor.
839 Smyrna, and its harbor.
927 Across the bay from Hong-Kong, China.
*946 The harbor at Port Arthur, Manchuria.

LOCKS AND LOCKAGE

*206 West over locks and vessels in the ship canal, Sa
Ste. Marie, Mich.
207 Whaleback freighters in the canal, Sault Ste. Marie.
*208 Down lockage in the canal, letting the water throu
the gates to equalize the level, Sault Ste. Marie.
*336 Overlooking the locks at Miraflores, showing lar
gates, etc.
337 In one of the immense chambers of the Gatun Loc
Panama.
*338 Close view of the great steel gates in the Miraflo
locks.
339 The Great Locks, after the water was let in, Panama.
374 Portage, before the days of locks.
*577 Locks in Bandak Nordsjo Canal, Norway.

CANALS

333 Digging the Culebra Cut in Panama Canal.
335 Looking down a long stretch of the finished canal, P
ama.

339 The Canal and Gatun Locks after the water was let in, Panama.
*624 The Kiel Canal.
*639 Canals in Holland.
*640 Tree-lined canal, Holland.
769 Ship canal, Corinth, Greece.

TRANSPORTATION OF ORE

*195 Piles of iron ore at the docks.
*196 Unloading ore from lake steamers—old and new method.
197 One-ton buckets for lifting ore from ships.
*198 Unloading ore steamer—lowering 5-ton electric clam.
*199 Electric unloader lifting five tons of iron ore.
*203 Pockets of ore, 160 tons each, on long dock, ready for shipment.
*204 Shaft house and machine shop.
227 Hauling ore in open pit.
*228 Steam shovel dumping its load into train.
*229 Five-ton steam shovel at work.
230 Down in a mine.
*231 Dragging cars of ore through subterranean passage.
*233 Locks, with two miles' frontage, holding 200,000 tons of ore.
*234 Loading a lake steamer with ore from the docks.
*265 Climbing the last loop on a mountain railway.
*266 Inclines to the mines.
*267 Loading surface ore.
268 Loading ore on car, deep in mine.

TUNNELS

*472 Chaupichaca tunnel, Peru.
*513 R. R. tunnel at Dover, England.
*701 The Axenstrasse, Switzerland.

BRIDGES

9 North Bridge at Concord (wooden girder type).
*31 On the Brooklyn Bridge (steel suspension with granite towers).
*32 Across Brooklyn Bridge (steel suspension with granite towers).
34 Queensboro Bridge, N. Y. (steel cantilever).
*57 High Bridge at Poughkeepsie, N. Y. (steel cantilever).
65 Bridge in Watkins Glen, N. Y. (wooden girder).
*72 Steel bridge at Niagara (steel arch bridge).
*77 Steel arched bridge at Niagara (steel arch).
146 Natural Bridge (stone arch).
*188 Steel bridge at St. Louis (steel arch).
*252 Bridge in Ouray, Box Canyon, Colo. (wood and steel gallery).
*269 Bridge across Canyon Diablo, Ariz. (steel girder, trestle type).
*472 Chaupichaca Bridge, Peru (steel girder, trestle type).
*496 London Bridge (stone arch).
497 Tower Bridge, London (steel and stone suspension with center bascule span and upper cantilever foot bridge).
511 Wooden bridge at Oxford, England.
535 Odd type of suspension bridge at Conway, Wales.
*542 Great Forth Bridge, Scotland (steel cantilever).
*596 Elevator and bridges, Stockholm (girder or truss type).
*598 Bridge, Stockholm (steel girder and butment).
*605 Queen Louise Bridge, Copenhagen (stone arch).
*613 Bridge over Moskwa River at Moscow (steel girder, stone butments).
*624 Bridge across the canal near Kiel, Germany (steel arch).
*634 Bridges at Heidelberg, Germany (stone arch).
*638 Pontoon bridge at Cologne, Germany (wooden pontoon).
*639 Bridges at Amsterdam (simple arch).

*656 Bridges across the Seine River, Paris (steel and stone arch).
*657 Bridge to City Island, Paris (stone arch).
675 The old aqueduct, Segovia, Spain (stone arch).
678 Famous "Flying Bridge," Spain (steel transporter type—cable-propelled car).
703 Bridges at Berne, Switzerland (stone arch).
708 Bridge in the gorge of the Aare River, Switzerland (wood and iron gallery).
725 Bridges across the Tiber at Rome (steel girder with stone buttresses and stone arch).
*736 Bridges at Florence (stone arch).
741 Bridge of Sighs, Venice (stone arch).
*777 Galata Bridge, Constantinople (pontoon).
913 Bridge across the great Gokteik Gorge, N. Burma (steel trestle).
933 A bridge in inland China (stone arch).
*982 Bridge at Melbourne, Australia (stone arch).

AERIAL TRANSPORTATION

*60 Curtis in his bi-plane.
144 Wright up in his bi-plane.
*591 Across enormous crevasse, Brigsdal Glacier, Norway.
636 Over the Lorelei Rocks, Germany.
678 The Flying Ferry at Portugalete, Spain.
*835 War balloon used by British in South African war.
947 War balloon at Port Arthur.
*948 500-lb. shell in its flight into Port Arthur.

MISCELLANEOUS

See numbers *4, *27, 36, *38, 39, 112, 116, 118, *119, 120, *121, *123, *127, *159, *160, 175, *180, *182, 183, 205, 298, 300, *318, *368, *376, *378, 385, *387, *411, 445, *452, 455, 481, 491, *498, *502, *514, *518, 551, *553, 575, *587, 614, *654, *863, *966, *974, 998.

SCHOOLROOM DECORATIONS

The publishers can supply on application beautiful photographs suitable for wall decoration of any subject in the above list in sizes 16 x 20—20 x 24.

ZONE LIFE

BY

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AUTHOR OF *"Explorations in Turkestan," "The Pulse of Asia," "Asia: A Geographic Reader," "Palestine and Its Transformation," "The Climatic Factor."*

640 STEREOGRAPHS OR SLIDES WITH 2,250 REFERENCES TO THEM

The stereographs and slides included in this classification from the 1,000 list illustrate the influence of different types of climate upon vegetation, animals, and man. They are grouped according to the divisions commonly recognized among climatologists. The equatorial zone and the frigid zone have not been subdivided since each of them retains a nearly uniform character in all parts. The zone of prevailing westerlies has been treated similarly, for its more unusual parts, such as inner Asia, are not here illustrated. The trade-wind zone and the subtropical zone, however, have been divided according to the amount of rainfall, or according to the season

at which it falls. Under each zone a number of topics have been added, and parts of the world seen in the stereographs and slides have been suggested for use in illustrating them. The purpose of the topics is to call attention to some of the most important ways in which one zone differs from another.

For the blackboard.

It is suggested that the teacher place the following observation outline (in part or whole) on the board and direct attention to it at the beginning of the lesson on Zone Life as a guide in the best use of the time allotted for the study of each stereograph. The outline, of course, may be modified to suit the particular subject and conditions. Some teachers prefer to depend on oral direction rather than a blackboard outline.

OUTLINE DIRECTING THE PUPILS' STUDY.

1. Name and character of the zone being studied.
2. Location, (———) country under observation.
3. Characteristics of the zone seen:
   - A. In vegetation.
   - B. In climate.
   - C. In animal life.
   - D. Clothing of the people.

E. Homes of the people.
F. In character of race types.
G. In civilization, commerce, transportation.

4. Effects of altitude.
   A. On clothing.
   B. On vegetation.
   C. On climate.
5. How does this zone differ from the zone you live in?
6. How does it differ from the zones on either side of it?

Publisher's Note.

The numbers used in the following list are the serial numbers found on the upper right-hand corner of the stereographs and on the slides.

Those numbers preceded by a star (*) are the ones included in the special "600" set.

For further illustrations for *Zone Life*, the teacher is referred to the wider range of material to be found in our general catalogue, and to our regular Travel Tours on the different countries, particulars of which will be sent on application.

1. *THE EQUATORIAL ZONE*

This is characterized by constant high temperature and by abundant rainfall distributed unequally through the year. Most portions have two rainy seasons, separated by two dry seasons. The facts most prominently illustrated by the regions seen in the stereographs and slides are the luxuriance of

vegetation, the backwardness of man, and the dependence of this zone upon the more northern zones so far as modern civilization, commerce, manufactures, and the like are concerned. 60 stereographs.

Panama, 328, 329, *330, *331, *334, 335.
Philippine Islands, *358, *359, 360, *361, 362, *363.
Costa Rica, *417, 418, *419, *420.
Venezuela, *440, *442, *443, *444, 445, 446.
Colombia, *447, 448, 449, *450.
Brazil, 455.
Ecuador, *457, *458, *459, *461, *463, *464, 465.
East Africa, 809, 810, *811, 812, 813, *816, *817, *818, 819.
Congo Free State, *822, 823, *824, 825.
Ceylon, 918, 919, *920, *921, *922, 923, *924, 925, *926.
Java, *997, 998.
Central Africa, 920, 827.

SUGGESTIONS FOR USE.

Vegetation and Scenery.

Panama, *328, 330. *Costa Rica,* *417, *420. *Venezuela,* *440. *Ecuador,* *457. *East Africa,* 810, 812, 813, *816, *817, *818. *Congo,* *822, 823, *824, 825. *Ceylon,* *920, *921, *922, 923, *924, 925. *Java,* 998. *Colombia,* *447.

Effect of Altitude.

Ecuador, *459, *461, *463, *464, 465.

Uncultivated Vegetable Products and their Uses.

Venezuela, 446. *Brazil,* 455.

Animals, their Uses and Products.

Wild. *East Africa,* 809, 810, 819. *Central Africa,* 820, 827. *Ceylon,* 923, 925.

Domestic. ***Philippines,*** *358, *363. ***Costa Rica,*** 418. ***Colombia,*** 448, 449, *450. ***Venezuela,*** 445 (hides). ***Ecuador,*** *461. ***East Africa,*** 813. ***Ceylon,*** *921, *924, 925, *926.

Agriculture and Agricultural Products.

Primitive Methods. ***Ceylon,*** *920, *924.

Fruits. ***Panama,*** *331. ***Costa Rica,*** *417, *420. ***Colombia,*** *447. ***East Africa,*** *816.

Grains. ***Ceylon,*** *920, *924.

Other seeds. ***Costa Rica,*** 418, *419. ***Ecuador,*** *457. ***East Africa,*** *817.

Fibers. ***Philippines,*** *361.

Leaves. ***Ceylon,*** *922.

General Views of Cities and Villages.

Panama, 328. ***Costa Rica,*** *417. ***Colombia,*** 448. ***Ecuador,*** *440, *463. ***Congo,*** *822, 823.

Homes of the People.

Panama, 329. ***Philippines,*** *359, 360, *363. ***Costa Rica,*** *417, ***Venezuela,*** *442. ***Ecuador,*** *458, *459. ***Colombia,*** 448, 449, *450. ***East Africa,*** *811, 813, *816. ***Ceylon,*** *920, *921, *926.

Public Buildings.

Panama, *330. ***Venezuela,*** *440. ***Colombia,*** *447.

Street Scenes.

Panama, 328, 329. ***Philippines,*** *358, 360, *363. ***Colombia,*** 448, 449, *450. ***Venezuela,*** *442, *443. ***Brazil,*** 455. ***East Africa,*** 809.

Dress.

Panama, 328, 329, *331. ***Philippines,*** *358, *359, 360, *361, 362, *363. ***Costa Rica,*** 418, *420. ***Venezuela,*** *442, *443, 445, 446. ***Colombia,*** *450. ***Ecuador,*** *457, *458, *459 (note effect of altitude in this and succeeding pictures), *461, *463, *464. ***East Africa,*** 809, 810, *811, 812, 813, *816,

*817. ***Congo,*** 823, *824. ***Ceylon,*** 918, 919, *920, *921, *922, *924. ***Java,*** *997, 998.

Life of the People.

Panama, 328, 329. ***Philippines,*** *359, 360. ***Venezuela,*** *442, *443, *444. ***Ecuador,*** *458, *459. ***East Africa,*** *811, *816.

Position and Occupations of Women.

Philippines, *359, 360. ***East Africa,*** *811, 812. ***Ceylon,*** *920.

Industries.

Philippines, *359, *361, 362. ***Ceylon,*** 918, 919.

Transportation and Communication.

By land. ***Philippines,*** *358, *363. ***Colombia,*** 449, *450. ***Venezuela,*** *442. ***East Africa,*** 809, *819, 825. ***Congo,*** 823.

By water. ***Panama,*** *331. ***Philippines,*** 362. ***Venezuela,*** *444, 445. ***Ecuador,*** *461, *464. ***Congo,*** *822, *824.

Commerce and Exports.

Philippines, *361. ***Costa Rica,*** *417, 418. ***Venezuela,*** 445, 446. ***Brazil,*** 455. ***Ecuador,*** *457. ***East Africa,*** 809. ***Ceylon,*** *922.

Health.

Panama, *330.

Presence of Northerners as Rulers and Leaders.

Panama, 328, *330, *334, 335. ***Costa Rica,*** *417. ***Venezuela,*** 445. ***East Africa,*** 810. ***Congo,*** *822. ***Ceylon,*** *922.

Ease of Getting a Living.

Panama, *331. ***Costa Rica,*** *420.

2. *THE TRADE-WIND AND MONSOON ZONES*

These are characterized by constant high temperature and by steady trade-winds from the northeast

or southeast during a large part of the year, or else by monsoon winds which blow from the south or southwest and take the place of the trade-winds during the summer. When the sun is farthest north or farthest south, however, equatorial conditions prevail in one or the other of the trade-wind zones and heavy rains usually fall. In these zones the contrast between the seasons is not great, although more important than in the equatorial zone. The climate is distinctly more healthful and invigorating than in the equatorial zone, however, and there is a correspondingly greater degree of energy among the people. Moreover, conditions are much more favorable for the white man from the north, and accordingly places in this zone seen in the stereographs or slides show far more of his influence. 84 stereographs.

A. WINDWARD WELL-WATERED REGIONS.

This includes places which lie on the east side of the continents and hence are fully exposed to the trade-winds. During the winter of their hemisphere the trade-winds blow upon them and bring more or less moisture from the ocean. During the summer the equatorial belt shifts over them, and rain is abundant and vegetation luxuriant. Accordingly these regions have rain at most times of the year,

and their dry season, corresponding to the late winter or early spring of their hemisphere, is short. It is often difficult to draw a distinct line between regions of this type and true equatorial regions. For instance, the southern islands of the Philippines are here classified under equatorial regions and the northern island of Luzon under the trade-wind type, but the distinction is not sharp. 30 stereographs.

Porto Rico, 322, *323, 324, *325, 326.
Hawaiian Islands, 341, *342, *343, *344.
Samoa, *348.
Philippine Islands, 353, *355, *356, *357.
Mexico, 401, 406, *407, *408, *411, *412.
Cuba, *421, *427, *428, 429, *431, *432.
Jamaica, 433, *434, *435.
Brazil, 453.

B. LEEWARD DESERT REGIONS.

This includes places which lie in the zone of the trade-winds, but cannot be reached by them until the winds have surmounted high mountains, or have crossed broad tracts of land and have therefore been obliged to give up most of their moisture. Hence such regions suffer a long dry season during the winter of their hemisphere, and only receive rain when the equatorial zone shifts over them in summer. All such regions have a somewhat arid appearance and some of them are genuine deserts. 29 stereographs.

Mexico, *398, *400, 402, *403, *404, 405, 413, *414, 415, *416.

Peru, *466, 467, *468, *469, *470, *473, 474, *475, 477, *478, 479, 480, *482, *483, 484.

South Africa *831, *832, *835, 838.

C. MONSOON REGIONS.

The regions falling under this head receive rain on their eastern sides during the time when the trade-winds prevail in the winter of their hemisphere. During the summer they are characterized by monsoon winds which blow from the south or southwest in the opposite direction to the trade-winds, and which give up abundant moisture. In the present classification all of India is included in this zone, although in the northern parts subtropical conditions prevail. 25 stereographs.

India, *885, *886, *887, 888, 889, 890, *891, 892, 893, 894, *895, 896, *897, 898, *899, 902, 905.

Burma, 907, *908, *910, *912, 913, 914, *915, 916.

SUGGESTIONS FOR USE.

(The letters A, B, and C refer to the three sub-divisions given above.)

Vegetation and Scenery.

(A) *Porto Rico,* *323, 324, *325.
Mexico, *411.
Jamaica, 433, *435.
Hawaii, *343, *344.
Cuba, *427.
Brazil, 453.

(B) *Mexico*, 413, *414, 402, *403, *404, 405 (cacti).
Peru, *468, *469, *475, 477, 479, 480, *482, *483, 484.
South Africa, *831, *832, 838.
(C) *India*, 889, 890, *897. *Burma*, *912, 913.

Effect of Altitude.

(B) *Mexico*, 402, *403.
Peru, 474, *475, 479, 480, *482, *483, 484, 477.
(C) *India*, *885, 890.

Uncultivated Vegetable Products and their Uses.

(A) *Mexico*, *411.
(C) *Burma*, 907, 914, 916.

Animals, their Uses and Products.

Wild.

(B) *Peru*, *473 (The llamas here shown are domesticated, but are essentially the same as the wild guanaco).
(C) *India*, 894, 896. *Burma*, 907.

Domestic.

(A) *Porto Rico*, 326. *Philippines*, *357.
(B) *Mexico*, *403. *Peru*, *470, *473, *483, 477.
South Africa, *831. *West Australia*, 991.
(C) *India*, 888, 893, *895, 902, 905.
Burma, 907, 914.

Agriculture and Agricultural Products.

Agricultural Methods.

(A) *Philippines*, *357. *Cuba*, *431.
Jamaica, 433, *434.
(B) *Mexico*, *404, *414. *Peru*, *468 (irrigation), *469, *470.

Agricultural Products.

Fruits.

(A) *Porto Rico,* *323, 324. *Hawaii,* *344.
Mexico, 401. *Jamaica,* 433, *434.

Grains.

(A) *Philippines,* *357.
(C) *India,* *886. *Burma,* *908.

Other Seeds.

(A) *Mexico,* *407, *408.

Fibers.

(A) *Philippines,* *355. *Mexico,* 406.
(B) *Mexico,* 415, *416. *Peru,* 467, *468.

Leaves and Stalks.

(A) *Cuba,* *431 (tobacco), *432.

Sap.

(A) *Cuba,* 429.
(B) *Mexico,* *404 (intoxicating liquor).
Peru, *469, *470.

General Views of Cities and Villages.

(A) *Porto Rico,* *325. *Hawaii,* 341.
Brazil, 453.
(B) *Mexico,* 402, 413. *Peru,* *466, *478, 484.
(C) *India,* 892, 898.

Homes of the People.

(A) *Porto Rico,* 322, *325. *Samoa,* *348.
Philippines, 353, *356, *357. *Mexico,* *407, *412.
Cuba, *428, *431. *Jamaica,* *435.
(B) *Peru,* *473, 479, *483.

Public Buildings.

(A) *Hawaii,* 341. *Cuba,* *421.
Brazil, 453.
(B) *Mexico,* *398, *400.
(C) *India,* 892, *899, 902.

Street Scenes

(A) *Hawaii,* *342.
(C) *India,* 890, 893, 894, *895, 905.

Dress.

Native Types.

(A) *Samoa,* *348. *Philippines,* *355, *356.
Mexico, 401, *407, *408, *412. *Jamaica,* *435.

(B) *Mexico,* 402, 413, *414, 415, *416 (Note effect of altitude on dress here and in following pictures), *403, 405.
South Africa, 838. *Peru,* *473, *475, 484.
(C) *India,* *886, *887, 888, 889, 890, 893, 894, *897, 902.
Burma, *908, *910, *912, 914, 916.

Foreign Types.

(A) *Porto Rico,* *323, 324. *Mexico,* 406.
Cuba, *428. *Jamaica,* 433, *434.
(B) *Peru,* *470.

Life of the People.

(A) *Porto Rico,* 322, *325, 326. *Samoa,* *348.
Philippines, *355, *356, *357. *Mexico,* *412.
Cuba, *428. *Jamaica,* *435.
(B) *Mexico,* 402, *404, 405, 413, *414, 415, *416.
Peru, *473, 479.

(C) *India*, *886, 889, 890, 893, 894, *895.
Burma, *910, 916.

Position of Women, and Women's Occupations.

(A) *Mexico*, 406, *412.
(B) *Peru*, *469, *475.
(C) *India*, *886, 889, 905.

Industries and Manufactures.

Home Industries.

(A) *Philippines*, *355.
Jamaica, *435.
Mexico, *412 (women grinding flour).
(B) *Mexico*, 413, 415, *416.
(C) *India*, *886, *887.

Manufactures.

(A) *Mexico*, 406. *Cuba*, 429, *432.
(B) *Peru*, 467.

Transportation and Communication.

By Land.

(A) *Porto Rico*, 326.
(B) *Mexico*, *403, *404, 405, 413.
Peru, *470, *473, 474, *475, 480, 477.
(C) *India*, 890, 893, 902, 905.
Burma, 913, 914.

By Water.

(A) *Peru*, *482
(C) *India*, 888. *Burma*, 916.

Commerce.

Exports of Raw Materials.

(C) *Burma*, *908, *915.

Health.

(A) *Philippines*, 353 (Houses on piles for the sake of healthful breezes).

Presence of alien races, (chiefly as rulers and leaders from Europe and the United States, but sometimes as Chinese and Japanese laborers who are far more industrious than the natives).

(A) ***Hawaii,*** 341, *342 (Japanese).
Cuba, *421 (Spanish), *427 (Americans).
(B) ***Mexico,*** *398, *400.
Peru, 467, 474.
South Africa, *832.
(C) ***India,*** 892, 893 (Signs in English).
Burma, 913, *915.

Ease of getting a living.

(A) ***Porto Rico,*** 324. ***Hawaii,*** *344.
Mexico, 401. ***Jamaica,*** *434.

Tropical Typhoons.

(A) ***Philippines,*** 353.

8. *THE SUB-TROPICAL ZONE*

The chief characteristic of this zone is that it is normally a region of high barometric pressure and hence dry, but either the zone of prevailing westerlies in winter or the zone of monsoons in summer shifts into it and produces a rainy season. Certain regions, such as the Gulf States, receive rain both from the westerlies and the monsoons, and hence have no dry season. This zone differs from the equatorial and trade-wind zones in having a pronounced difference in temperature between summer and winter, a fact which has much to do with the

high degree of civilization and progress among its people. 174 stereographs.

A. REGIONS WITH SUMMER RAIN OR RAIN AT ALL SEASONS.

This includes the sub-tropical countries of the eastern parts of Asia and North America which receive rain in summer from inblowing winds of the monsoon type, while in winter they are either relatively dry as in China, or receive rain from cyclonic storms as in the Gulf States of America. The whole of China is included in this division, partly because, while parts of the country may be considered as falling in the zone of prevailing westerly winds, no part is visited by storms at all seasons, which is one chief characteristic of that zone, and partly because the effect of the climate on the people is almost the same in all parts. 40 stereographs.

Gulf States.

Georgia,	*159, *160, 161.
Florida,	162, 163, *164, *165, *166, *167, *168, *169.
Alabama,	*170.
Mississippi,	172.
Louisiana,	*173, *174.
Texas,	176, *178, *180, *182.
Argentine,	*487, *488, *489.
Uruguay,	*492, *493, *494.
China,	927, *928, *929, 930, *931, *932, 933, *934, 935, 937, *938, 939, 940, 942, *944.

B. REGIONS WITH WINTER RAIN.

These regions receive rain in winter from storms of cyclonic character, such as prevail in the next zone to the north, but have relatively little rain in summer. Some of the countries here included, for instance, northern Italy, might almost as well be included in the zone of prevailing westerlies. 103 stereographs.

Utah,	256.
Colorado,	(southwestern portion), 244, *245, *246, 251, *254, 255.
California,	*279, *280, *281, *282, *283, *286, *287, *291, *292, *293, *294, 295, *296, *297, 298, *299, 300.
Spain,	674, 678, *679, *680, *681, *684, *685, *686, *687, 690, *691.
Italy,	725, *730, *731, 733, *736, *743, *744, 745, 746, *747, 748.
Greece,	*761, *768, 769, *771, 772, 773, 774, 775, *776.
Turkey,	*777, 778, 780, *781, *782, 839.
Palestine,	845, 847, 848, 849, 850, *851, 852, 853, 854, *855.
Syria,	856, *858, *859, *860, *861, *862, *863, *864, *865, 867, 872.
Mesopotamia,	873, *874, *875, *876, 877, 878, 879, *880, *881, 882.
Algiers,	*805, 806, *807, 808.
Cape Colony,	*829.
Victoria (Australia),	*982, 984, *985, *987, 988, *990.

C. REGIONS WITH A DEFICIENCY OF RAIN AT ALL SEASONS.

This includes some regions, such as Arizona and New Mexico, which have two rainy seasons, in summer and winter respectively, but which receive only a small amount of rain at either season. It includes other regions, such as Egypt, which have rain only in winter. All of these regions are deserts except in favored localities. 31 stereographs.

Arizona,	*257, 258, *259, *261, *262, *263, *264, *265, 268, *269, *270, *271, *272, *273, 277.
Egypt,	787, 788, *789, *792, 793, *795, *796, *797, *798, *799, *801, 802, *803, 804.
Arabia (Sinai),	841, *842.

SUGGESTIONS FOR USE.

(The letters A, B, and C refer to the three sub-divisions given above.)

Vegetation and Scenery.

(A)	*Gulf States*	163, *166.
	China,	927, 930, *943, *944.
(B)	*California,*	*279, *280, *282, *291, *292, *299, 300.
	Spain,	674, *681, *684, *686.
	Colorado,	255.
	Victoria (Australia),	*982, *987.
	Turkey,	839.
	Italy,	*730, *731, 733, 745, 746, *747, 748.
	Syria,	872.
	Greece,	*768, 769, *771, 772, 773, 774, 775, *776.
	Cape Colony,	*829.
	Palestine,	845, 848, 849, 850, 854, *855.

(C) *Arizona*, *257, 258, *261, *262, *265, *269, *270, *271, *272, *273, 277.
Egypt, *789, *792, 794, *798, 802.
Arabia, 841, *842.

Effect of Altitude.

(B) *Colorado*, 244, *245, *246, 251.
Syria, 872.

Uncultivated Vegetable Products and their Uses.

Lumbering.

(A) *Gulf States*, *159.
(B) *California*, *293, *294, 295, *296, *297, 298, *299, 300.

Animals, their Uses and Products.

Wild.

(A) *Gulf States*, *180, 183.
(B) *California*, *283 (ostrich), *286, *287.
Palestine, 853 (fish).
Australia, 984.

Domestic.

(A) *Gulf States*, *166, 172.
China, *938.
(B) *California*, *283.
Spain, *679.
Italy, *744, 745.
Palestine, 845, 848, 850, 852.
Victoria (Australia), *985, *987.
Syria, *859, *863, *865.
(B) (*Cont'd*)
(*Silk worms*), *864, 867.
Mesopotamia, *875, 878, 882.
(C) *Arizona*, *257, 258, *259, 270, 277.
Egypt, 788, *789, 794, *799.
Arabia, *842.

Agriculture and Agricultural Products.

Agricultural Methods.

(A) ***Gulf States,*** *160, *170, *182.
(B) ***California,*** *280.
Spain, 674, *686, *691.
Palestine. 845.
(C) ***Egypt,*** *799.

Irrigation.

(B) ***California,*** *279, *280, *282.
Mesopotamia, *874, *875, *876.
(C) ***Egypt,*** *792, *797, *798, 802.

Agricultural Products.

Fruits.

(A) ***Gulf States,*** *167, *168.
(B) ***California,*** *279, *280, *281.
Spain, *686, *691.
Italy, *744.
Mesopotamia, *874, 882.
(C) ***Arabia.*** 841(palms).

Grains.

(A) ***Gulf States,*** *182.
China 933.
(B) ***Spain,*** 674.

Fibers.

(A) ***Gulf States,*** *160, 161, *178, *180.

Leaves, Bark and Stalks.

(A) ***China,*** *932, 933.
(B) ***Spain,*** *681(cork).

Sap.

(A) ***Gulf States;*** *173.

General Views of Cities and Villages.

(A) ***Gulf States,*** *159, *173.
Argentine, *487.
(B) ***California,*** *279.
Utah, 256.
Spain, *678, *684, *687.
Italy, 725, *730.
(A) ***Uruguay,*** *492.
China, 927, *928, 930, 937, 939, 940.
(B) ***Italy*** *(Cont'd)* 733, *736, 745, 746, 748.
Greece, *761, *771, 775.

(B) *Turkey*, *777, 778, 780, *781, 839.
[*Palestine*, 847.
Syria, *859.
(C) *Arizona*, *265.

Homes of the People.

(A) *Gulf States*, 162, 172.
China, 939.
(B) *Spain*, 674.
Syria, *858, *863.
Victoria (Australia), *990.
(C) *Arizona*, *261, *262.
Egypt, *798.

Public Buildings.

(A) *Argentine*, *488.
Uruguay, *494.
China, 940, 942, *944.
(B) *Spain*, *684, *685.
Italy, 725, *736.
Turkey, 778.
Mesopotamia, *881.
(C) *Egypt*, 788.

Street Scenes.

(A) *Argentine*, *489.
Uruguay, *493.
China, *931, *932, 935, *938.
(B) *Algiers*, *807, 808.
Spain, *679, *680.
Italy, *743.
(B) (*Cont'd*)
Turkey, *782.
Palestine, 848.
Mesopotamia, *881, 882.
(C) *Egypt*, 787, *789.

Dress.

(A) *Gulf States*, *160, 172.
China, *929, *931, *932, 933, 935, *938, *944.
(B) *Spain*, *679, *680, *686, *691.
Italy, *744, 745.
Greece, *761, *771, 774, *776.
Turkey, *782.
Palestine, 845, 847, 848, 849, 850, *851, 852, 853, 854.

(B) *Algiers*, *805, 806.
Cape Colony, *829.
Mesopotamia, *881.
Victoria (Australia), *982, *987, 988.
(C) *Egypt*, *792.

Syria, *858, *860, *861, *862, *863, *864, 867.
Algiers, 808.
Mesopotamia, *874, *875, 878, 879, *880, *881.
(C) *Arizona*, *257, *259, *261, *262, *263, *264, *269.
Arabia, 841, *842.
Egypt, 787, 788, *792, 793, 794, *797, *798, *801, 802, 804.

Life of the People.

(A) *Gulf States*, 172.
China, *929, *931, 933, 935.
(B) *Spain*, 674, *679, *680, *691.
Victoria (Australia), *990.
Italy, *743, *744, 745.
Greece, *771.
(B) (*Cont'd*)
Palestine, *851, 852, 853.
Syria, *858, *859, *860, *861, *862, *863.
Algiers, 808.
(C) *Arizona*, *262, *263, *264.

Positions and Occupations of Women.

(A) *Gulf States*, *160.
(B) *Spain*, 674, *679, *691.
Greece, *771.
(B) (*Cont'd*)
Palestine, *851, 853.
Syria, *858, *861, *862.

Industries and Manufactures.

(A) *Gulf States*, 161, *173, *178.
(B) *California*, *294, 295, *296, *297, 298, *299, 300.
Spain, 690.
Palestine, *851.
(B) (*Cont'd*)
Syria, *860, *862, *864, *865, 867.
Victoria (Australia), *985, 988.
Mesopotamia, 879.
(C) *Arizona*, *263, *264, *265.

Transportation and Communication.

By Land.

(A) ***Gulf States,*** 162, *164, *166, *169, 172.
China, 927, *928, 935, *938.

(B) ***California,*** *282, 298.
Spain, *680.
Italy, *743.
Greece, 769, 772.
Turkey, *777, *782.
Palestine, 848, 850, 852.
Syria, *859, 867.
Mesopotamia, 882.

(C) ***Arizona,*** *265, *269, *273, 277.
Egypt, 788, *789.

By Water.

(A) ***Gulf States,*** *159, *173, *174.
Argentine, *487.
Uruguay, *492.
Mesopotamia, 878. *880, *881.
China, 930.

(B) ***Spain,*** 678, *687.
Turkey, *781, 839.
Palestine, 853.
Algiers, *805.

(C) ***Egypt,*** 802, 804.

Commerce.

Exports of Raw Materials.

(A) ***Gulf States,*** *159, 161, *180.

(B) ***Spain,*** *683.
Mesopotamia, 878.

Exports of Manufactured Products.

(A) ***Gulf States,*** *173, *174.

Health and Pleasure Resorts.

(A) ***Gulf States,*** *164, *169.

(B) ***California,*** *291, *292.

Ruins. (Note that B and C of this zone are the regions where the world's chief ruins are located.)

(B) ***Colorado,*** *254, 255.
Italy, 725, 745.
Greece, *761, *771, 773, 774.

(B) *Turkey*, *781.
Palestine, 847.
Syria, 856.
Mesopotamia, 873, *876, 877.

(C) *Arizona*, *261.
Egypt, *789, 793, 794, *801, 802, 804.

Tropical Hurricanes.
(A) *Gulf States*, 176.

4. *THE ZONE OF PREVAILING WESTERLIES*

This includes countries which receive most of their rain from cyclonic storms, and which have their rain distributed fairly evenly throughout the year. It might be subdivided into coastal and interior regions, but this is not here attempted. This zone, like the others, is by no means bounded by parallels of latitude. In the United States it goes south almost to Florida in latitude 30°, while in parts of Europe it is bordered on the south by the Alps in latitude 46°. The contrasts between summer and winter here reach a maximum, and there are also much more frequent changes of weather from day to day and from week to week than in any other zone. Both of these conditions are favorable to activity and energy. This is one of the reasons why civilization reaches its highest development in this zone. Hence the places seen in the stereographs and slides show many evidences of skill in manufactures, architecture, government, and all the arts and sciences. 296 stereographs.

NORTH AMERICA.

Eastern United States, 51, 533, 534.

New England States.

Massachusetts, *2, 6, 8, 9, *10, 11, 12, 13, 14, *15.
New Hampshire, *25, 26, *27.

Middle Atlantic States.

New York, *29, *30, *44, *45, *48, 53, *54, *56, *57, 59, *61, 62, *63, 64, 65, *66, *67, 68, *69, *72, 74, *77, *78, *79, *80.
New Jersey, 81, 82, *83, *86, *87, *88.
Pennsylvania, *108, *109, 118, *119, *123, *127.
District of Columbia, *128, *129, *130, *131, *137.

South Atlantic States.

Virginia, 141, 142, *143, 146.
North Carolina, *149, *150, *151.
South Carolina, 152, *154, *156.

Central Western States.

Kentucky, 185, *186.
Missouri, *187, *188, 190, 191.
Kansas, *193.

Great Lake States.

Ohio, *195.
Michigan, *200, *201, 202, *206, 207, *208, *210, *211.
Illinois, *213, *214, *215, *216, 217, *218.
Wisconsin, *219, *220, *223.
Minnesota, 224, *225, *226, *229, *234.

Rocky Mountain States.

Wyoming, 235, *236, *237, *238, 240, *241, 242, *243.

Pacific Coast States.

Oregon, *303, *304, *305, *306, *307.
Washington, 308, *309, 310, *315.

Eastern Canada, *364, *365, *366, *368, *369, *371, 372, 373, 374.

Western Canada, *375, *376, *377, *378, *380, *381, *383, *384, 388.

South America.

Chili, 485, *486.

EUROPE.

England and Wales, *495, *509, 510, 511, *513, *514, 516, *519, *524, *526, *527, 528, 530, 533, 534, 535.

Scotland, 539, 541, *542, *543, 544, 545, *546, *547, *548, *549, 550, 551, 552, *553.

Ireland, *554, *555, *557, *558, *559, *560, *562, 565, *566, *567, 568, *569, *571.

Norway, *572, 574, 575, *577, *578, *579, 580, 581, *585, *586, *591, *592.

Sweden, *596, 597, *598, *600, *601, *602, 603.

Denmark, *604, *605, 606.

Russia, *607, *609, *613, 614, 615, 616, 617, *618, 619, *620.

Germany, *621, 623, *624, *625, *626, 627, *628, 630, *631, *632, *633, *634, *635, 636, 637.

Holland, *640, *642, 643, *644, *645, *646.

Belgium, '649, *650, *651.

France, 652, *655, *661, 664, *665, 666, *667, *668, *669, 670, 671, *672.

Switzerland, 697, *698, *699, *700, *701, 703, *705, 706, *707, 709, *710, *713, 715, *716, 718, *724.

Austria, 750, *752, *756, 757, *758, 759, *760.

ASIA.

Japan, 954, *955, *956, 959, *960, *961, *962, 963, *964, 965, *967, *968, *969, *970. *971, *972, *973, *974, *975.

Manchuria, *946, 947.
Korea, 979, *980, *981.

AUSTRALIA AND NEW ZEALAND.

Tasmania, *992.
New Zealand, 993, *994, 996.

SUGGESTIONS FOR USE.

Vegetation and Scenery.

Eastern United States, 533, 534. *New England*, 9, *10, 11, 14, *27.
Middle Atlantic, *54, 65, *67, *69, *72, 74, *77, *79, *80, 84, *108, *109, *127.
South Atlantic, 146, *149, 152. *Central Western*, *193. *Great Lakes*, *201, 202, 217, *223.
Rocky Mountains, 235, *236, *237, *238, 239, 240, *241, 242, *243. *Pacific Coast*, *303, *304, *305, *306, 310. *Eastern Canada*, *364, *365, *366, 373, 374, *380, *381, *383.
England, 510, 511, *513, 516, *524, 533, 534. *Scotland*, 539, 541, *543, 544, *547, *548, *549, 550, 551, 552, *553. *Ireland*, *555, *557, *562, *566, *567, *571.
Norway, 575, *577, *578, *579, 580, 581, *585, *586, *592. *Sweden*, *600, *601, 603.
Russia, *609, 619. *Germany*, 630, *631, *632, *633, *634. *Holland*, *642, *646.
Belgium, *650. *France*, 652, 664, *665, 666, *667, 670, 671.
Switzerland, 697, 709. *Austria*, *756, 757. *Japan*, 954, *956, *961, *964, *967, *970, *972, *973, *974, *975. *Tasmania*, *992. *New Zealand*, *994, 996.
Chili, 485, *486.

Effect of Altitude.

Western Canada, *380, *381, *383. *Norway*, *591, *592. *Germany*, *631. *France*, *667.

Switzerland, *698, *699, *700, *701, *705, 709, *710, *713, 715, *716, 718, *724.

Austria, *756, 757, 759, *760. *Japan*, *956. *New Zealand*, 996.

Uncultivated Vegetable Products and their Uses.

Middle Atlantic, 84. *South Atlantic*, *149, *150, *151. *Great Lakes*, *219, 224, *225.

Pacific Coast, *304, *305.

Animals, their Uses and Products.

Wild.

Eastern United States, 51, 533, 534. *Central Western*, 191. *Rocky Mountains*, *238, 239.

Eastern Canada, *368. *England*, 533, 534.

Domestic.

Middle Atlantic, *66, *67, 68, *86, *87, *88. *Great Lakes*, *201, *213, *214, 217, *218. *Pacific Coast*, *309.

Scotland, 516, *527, *543, 544. *Ireland*, *569. *Norway*, *585, *586, *592. *Denmark*, 606. *Russia*, 617. *Holland*, *642, 643, *646.

France, 664. *Switzerland*, 715. *Austria*, 757, *760.

Fisheries.

New England, 12, 13. *Middle Atlantic* *63, 64. *Pacific Coast*, *306, *307, 308.

Scotland, 545.

Agriculture and Agricultural Products.

Methods of Agriculture.

Middle Atlantic, 59. *Great Lakes*, *200, *216. *Pacific Coast*, *309. *Western Canada*, *376, *377. *England*, *527, 528. *Ireland*, *566. *Norway*, *578. *Sweden*, *601.

Germany, *626, 630. *Holland*, *642, *646 (pumping water with windmills).
France, *661, 671.
Fruits.
Pacific Coast, *303, 310. *France*, *661. *Japan*, *974.
Grains.
Central Western, *193. *Great Lakes*, *200, *216. *Pacific Coast*, *309. *Western Canada*, *376, *377.
Ireland, *566. *Sweden*, *601. *Germany*, 630. *France*, 652, 671. *Japan*, *955, *971, *972, *974, *975.
Fibers.
Belgium, *650, *651.
Leaves and Stalks.
England, *527. *Norway*, *578 (hay). *Russia*, *609. *Japan*, *973. *Tasmania*, *992.
Roots.
Middle Atlantic, 59. *Germany*, *626.

General Views of Cities and Villages.
New England, 12, 13, *25. *Middle Atlantic*, *30, *48, 82, *129, *130, *131.
Great Lakes, *213. *Pacific Coast*, *315, *366. *Eastern Canada*, *369, *371.
Western Canada, *375. *England*, 511, 515. *Scotland*, 545. *Ireland*, *554, *555, 565.
Norway, *579, 580. *Sweden*, *596, *598, *600. *Denmark*, *605. *Russia*, *613, 617, 619.
Germany, *621, *634, 637. *Holland*, *640, *644. *France*, *655, *661, *665, 666, *668.
Switzerland, *698, *701, 703, *713, *716, *724. *Austria*, 750, *758. *Japan*, *955, 959, *973.
Manchuria, *946. *Korea*, 979.

Homes of the People.
New England, 8, 26. *Middle Atlantic*, *56. *South Atlantic*, 141, *143.

Central Western, *186. *Great Lakes*, *201, 202. *Pacific Coast*, *303, *306.
Eastern Canada, *365. *England*, 515, *524, *526, 530. *Scotland*, 539, *546, *549, 550.
Ireland, 565, 568, *569. *Norway*, 575, 581, *592. *Sweden*, *600. *Russia*, *618.
Germany, *634. *Holland*, 643, *645. *France*, *669. *Switzerland*, 706, *707, *724.
Japan, *962, 963.

Public Buildings.

New England, *2, 6. *Middle Atlantic*, *29, *45, *48, *128, *130, *131, *137.
South Atlantic, 142. *Eastern Canada*, 372. *England*, *509, 511. *Scotland*, 539, *543, *547.
Ireland, *554. *Sweden*, *596, *598. *Russia*, *613, 614, 615. *Germany*, *621, 623, *625, *632, *634, 637. *Holland*, *640. *Switzerland*, 697, *698, 715.
Austria, 750, *752.

Street Scenes.

Central Western, *188. *England*, 515. *Scotland*, *546. *Sweden*, 597, *602. *Denmark*, *604.
Russia, *607, 615. *Germany*, 623. *Austria*, *760. *Japan*, *960, *961. *Korea*, 979.

Dress.

New England, 12. *Middle Atlantic*, *63, 64. *South Atlantic*, *149. *Scotland*, *542.
England, 516. *Norway*, *578, 580, 581, *592. *Sweden*, *600, *601, *602.
Russia, *609, 614, 616, 617, *618. *Germany*, *626, 630. *Holland*, *642, 643, *644, *645.
France, *669, 670, 671. *Switzerland*, *705, 706, *707, *724. *Austria*, *756, *758.

Japan, 954, *955, *956, *960, *961, 963, *964, 965, *967, 968, *970, *971, *972, *973, *974.

Manchuria, *946. *Korea*, 979, *980, *981. *New Zealand*, 993.

Life of the People.

Middle Atlantic, 84. *England*, 516. *Sweden*, *602. *Russia*, 616, *618. *Holland*, *645. *Austria*, *758. *Japan*, *961, 963, *970. *Korea*, *981. *New Zealand*, 993.

Position and Occupations of Women.

Russia, *609, *618, *620. *Germany*, *626, 627, *628, 630. *Holland*, *642, 643, *645.

France, *669. *Switzerland*, *713. *Austria*, *758, *760. *Japan*, *955, *971, *973.

Norway, *578. *Sweden*, *601.

Industries.

New England, *15, *25. *Middle Atlantic*, *66, *67, 68, *78, *86, *87, *88, *109, *119, *123, *127. *South Atlantic*, *149, *150, *151, *154, *156.

Great Lakes, *210, *211, *219, *220, 224, *225, *226, *229. *England*, *519.

Ireland, *557, *558, *559, *567. *Denmark*, 606. *Russia*, *620. *Germany*, 627, *628.

Holland, *642. *Belgium*, *651. *France*, *668, *672. *Japan*, 968, *969. *Korea*, *980.

Transportation and Communication.

By Land.

Central Western, *188. *Great Lakes*, *195, *225. *Rocky Mountains*, 235, *236.

New England, 26. *Middle Atlantic*, 53, *57, *79, 81. *South Atlantic*, *149.

Eastern Canada, *365. *Western Canada*, 388. *England*, *513. *Scotland*, *542, 551.

Ireland, *555, *557, 565. *Russia*, 614, 615. *Germany*, 623. *Holland*, *642, 643.

Switzerland, *699, 709. *Austria*, *758. *Japan*, 954, *960, *964, 965, *967. *Korea*, 979.

By Water.

New England, 14. *Middle Atlantic*, *29, *30, *44, *45, *48, *57, *61, 62.

Central Western, *187. *Great Lakes*, *195, *206, 207, *208, *215, *234. *Pacific Coast*, *304, *305, *315. *Eastern Canada* *364, *366. *Western Canada*, 388.

England, *495, *509, 510, *514. *Scotland*, 545. *Ireland*, *554, *560.

Norway, *572, 574, *577, *585. *Sweden*, *598. *Denmark*, *604. *Germany*, *624, 637.

Holland, *640, *644. *Belgium*, *649. *France*, 666, 670.

Health and Pleasure Resorts.

New England, *27. *Middle Atlantic*, 65, *69, *72, 74, *77, *79, 82, *83. *Great Lakes*, *223.

South Atlantic, 146. *Rocky Mountains*, 235, *236, *237, *238, 239, 240, *241, 242, *243.

Eastern Canada, 373, 374. *Western Canada*, *380, *381, *383, *384. *England*, 510, *514.

Scotland, 551, 552, *553. *Ireland*, *562, *571. *Sweden*, 603. *France*, *665, 666, *667, *672. *Norway*, *579, 580, 581, *585, *586, *591, *592.

Germany, *631, *632. *Switzerland*, 697, *698, *699, *700, *701, 703, *705, 706, *707, 709, *710, *713, 715, *716, 718, *724. *Austria*, *756, 757, *758, 759, *760.

Japan, *956, *961, *964, *967. *New Zealand*, *994, 996.

Effect of Storms and Floods.

Middle Atlantic, *79, 118. *Central Western*, 185, 190

5. *ARCTIC REGION*

This includes primarily all regions which lie so far to the north that they are too cold for vegetation, but it is here made to include also certain regions which have some vegetation, but are so cold that people cannot get a living by cultivating the soil. Here again the boundaries are irregular, for while Labrador might fairly be called Arctic, Norway almost at the Arctic circle has the character of the zone of prevailing westerlies. In this zone the contrast between the seasons declines once more, just as it does in the subtropical and tradewind zones, and hence has only a moderate stimulating effect. This, together with the more important fact of an almost complete absence of resources, prevents the progress of civilization. 20 stereographs.

Southern Alaska, *316, 317.
Yukon region of Alaska and Canada, *318, *319, 385, *386, *387.
Arctic Coast of North America, 50, *389, 390, *391, 392, *396, 397.
Northern Norway, *582, *593, *595.
Greenland, *393, *394, *395.

Scenery (including vegetation).
Southern Alaska, *316, 317. ***Yukon***, *318, 385 *386, *387
Arctic Coast, *389, *391, 392, *396.
Greenland, *394, *395. ***Norway***, *582, *593, *595.

Animals, their Uses and Products.
Wild.
Greenland, *394. ***Arctic Coast***, 50, 397.

Domestic.

Arctic Coast, *389. ***Greenland***, *395. ***Norway***, *582, *593.

General Views of Cities and Villages.

Yukon, *387.

Homes of the People.

Southern Alaska, *316. ***Arctic Coast***, 390, 392. ***Greenland***, *395. ***Norway***, *593.

Dress.

Southern Alaska, *316. ***Arctic Coast***, 390, 392. ***Greenland***, *393, *395. ***Norway***, *593.

Industries.

Yukon, *319, *386, *387. ***Arctic Coast***, *396, 397.

Transportation and Communication.

By Land.

Arctic Coast, 392.

By Water.

Southern Alaska, *316, 317 ***Yukon***, 385, *318. ***Arctic Coast***, *389, *391, *396, 397.

SCHOOLROOM DECORATIONS

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INDEX

KEY TO ABBREVIATIONS OF CLASSIFICATIONS

Geo. Cl. = Geographical Classification or Directory of Places.
Agri. Cl. = Agriculture Classification.
Animals Cl. = Animals Classification.
Archit. Cl. = Architecture Classification.
Biog. Cl. = Biography Classification.
Bot. Cl. = Botany Classification.
Child Cl. = Child Life Classification.
Cities Cl. = Cities and City Life Classification.
Civ. Bett. Cl. = Civic Betterment Classification.
Eng. Comp. Cl. = English Composition Classification.
Geol. Cl. = Geology Classification.
Gen. Hist. Cl. = General History Classification.
Amer. Hist. Cl. = American History Classification.
Homes Cl. = Homes and Life of the People Classification.
Home Econ. Cl. = Home Economics Classification.
Liter. Cl. = Literature Classification.
Man. Tr. Cl. = Manual Training Classification.
Myth. Cl. = Mythology Classification.
Nature Cl. = Nature Study Classification.
Phys. Geo. Cl. = Physical Geography Classification.
Prod. & Indus. Cl. = Products and Industries Classification.
Races Cl. = Races of Mankind Classification.
Topics Cl. = Topics for the Grades Classification.
Trans. Cl. = Transportation Classification.
Zones Cl. = Zone Life Classification.

The numbers here used are the page numbers.

AARE RIVER, *Geo. Cl.* 44, 45; *Cities Cl.* 240.
ABBEY, FURNESS, *Geo. Cl.* 34; *Archit. Cl.* 111; *Eng. Comp. Cl.* 298; *Gen. Hist. Cl.* 332.
ABBEY, MELROSE, *Geo. Cl.* 34; *Archit. Cl.* 111; *Eng. Comp. Cl.* 308; *Gen. Hist. Cl.* 332, 336.
ABBEY, WESTMINSTER, *Geo. Cl.* 33; *Archit. Cl.* 111; *Eng.*

Comp. Cl. 301; *Gen. Hist. Cl.* 332.
ABBOTT, LYMAN, *Biog. Cl.* 145; *Liter. Cl.* 430.
ABRAHAM, *Biog. Cl.* 204.
ACHILL ISLAND, *Geo. Cl.* 36.
ACROPOLIS OF ATHENS, *Geo. Cl.* 47, 48; *Archit. Cl.* 108.
ADAMS, JOHN, JOHN QUINCY, SAMUEL, *Biog. Cl.* 132, 134.
ADDISON, JOSEPH, *Biog. Cl.* 167; *Liter. Cl.* 457.
AËRIAL TRANSPORTATION, *Trans. Cl.* 641.
AËROPLANES, *Geo. Cl.* 6, 11.
AFRICA, *Geo. Cl.* 49; *Biog. Cl.* 201; *Child Cl.* 228; *Gen. Hist. Cl.* 335; *Homes Cl.* 390; *Phys. Geo. Cl.* 554; *Topics Cl.* 604. See also *Zones Cl.* 643-676.
AFRICAN PEOPLE, *Races Cl.* 591.
AGAMEMNON, *Biog. Cl.* 199; *Myth. Cl.* 508.
AGRA, INDIA, *Geo. Cl.* 56; *Cities Cl.* 235, 240, 246; *Civ. Bett. Cl.* 279.
Agriculture Classification, 63-80.
AGRICULTURE, METHODS OF, *Prod. & Indus. Cl.* 569; *Home Econ. Cl.* 403; elementary agriculture, *Nature Cl.* 528; agricultural industry, *Gen. Hist. Cl.* 339. See also *Zones Cl.* 643-676.
ALABAMA, *Geo. Cl.* 12; *Homes Cl.* 379. See also *Zones Cl.* 643-676.
ALASKA, *Geo. Cl.* 21; *Phys. Geo. Cl.* 552; *Topics Cl.* 609. See also *Zones Cl.* 643-676.
ALBERTA, CANADA, *Geo. Cl.* 25; *Eng. Comp. Cl.* 293.
ALCIBIADES, *Biog. Cl.* 200.
ALCOTT, LOUISA, *Liter. Cl.* 430.
ALDRICH, THOS. B., *Liter. Cl.* 431.
ALEXANDER THE GREAT, *Biog. Cl.* 201.
ALFRED THE GREAT, *Biog. Cl.* 160.
ALGERIA, *Geo. Cl.* 50; *Homes Cl.* 391; *Races Cl.* 601; *Topics Cl.* 604. See also *Zones Cl.* 643-676.
ALGIERS, *Geo. Cl.* 50; *Cities Cl.* 235, 237, 243; *Civ. Bett. Cl.* 264.
ALHAMBRA, THE, *Geo. Cl.* 43; *Eng. Comp. Cl.* 295; *Liter. Cl.* 439.
ALLIGATORS, *Animals Cl.* 82; *Nature Cl.* 522.
ALLUVIAL DEPOSITS, *Nature Cl.* 531; fans, *Phys. Geo. Cl.* 619; plains, *Nature Cl.* 531; *Phys. Geo. Cl.* 548; soil, *Nature Cl.* 528.
ALMORAIMA, SPAIN, *Geo. Cl.* 43.
ALPS, Austrian, *Geo. Cl.* 47; Bavarian, *Geo. Cl.* 40; Swiss, *Geo. Cl.* 44, 45.
ALTITUDE, *Topics Cl.* 620; effect of, *Zones Cl.* 643-676.
AMALFI, ITALY, *Geo. Cl.* 46; *Cities Cl.* 238, 244; *Civ. Bett. Cl.* 256; *Eng. Comp. Cl.* 299; *Gen. Hist. Cl.* 332.
AMERICA, see Central, North and South America.
AMERICAN INDIANS, *Amer. Hist. Cl.* 343; *Homes Cl.* 380; *Races Cl.* 594.
REVOLUTION, *Amer. Hist. Cl.* 358.

AMRITSAR, INDIA, *Geo. Cl.* 55; *Cities Cl.* 235, 240, 245; *Eng. Comp. Cl.* 305.
AMSTERDAM, *Geo. Cl.* 40; *Cities Cl.* 234, 241, 243, 247; *Civ. Bett. Cl.* 253; *Eng. Comp. Cl.* 289.
ANDESITE ROCKS, *Geol. Cl.* 319.
ANDES MOUNTAINS, *Geo. Cl.* 30, 31, 32; *Phys. Geo. Cl.* 552.
ANGLO-AMERICANS, *Races Cl.* 598.
ANIMAL AND PLANT RELATIONS, *Bot. Cl.* 212.
Animals Classification, 81-102.
ANIMAL LIFE, *Eng. Comp. Cl.* 308; *Nature Cl.* 519; animal products, *Nature Cl.* 522; *Prod. & Indus. Cl.* 574; use of, *Trans. Cl.* 628; raising live stock, *Agri. Cl.* 73; production of food, *Home Econ. Cl.* 410. See also *Topics Cl.* 603-619; *Zones Cl.* 643-676.
Classic myths, *Myth Cl.*, Neptune and Triton, 501; Golden Fleece, 509; winged horse, 510; Psyche, 513. Also see under Romulus and Remus, Jupiter, Apollo, Pan, etc.
ANCIENT HISTORY, *Gen. Hist. Cl.* 328.
ANTHRACITE COAL, *Geo. Cl.* 9, 36; *Home Econ. Cl.* 424; *Nature Cl.* 527, 529; *Prod. & Indus. Cl.* 581; geologic origin of, *Geol. Cl.* 318, 321.
ANTIOCH, SYRIA, *Geo. Cl.* 54.
ANTONY, MARC, *Biog. Cl.* 193.
ANTWERP, *Geo. Cl.* 41; *Cities Cl.* 234, 238; *Civ. Bett. Cl.* 276.
APES, *Animals Cl.* 82; *Nature Cl.* 520.
APHRODITE, *Myth. Cl.* 507.
APOLLO, *Myth. Cl.* 502.
AQUEOUS ROCKS, *Geol. Cl.* 320.
ARABIA, *Biog. Cl.* 205. See also *Zones Cl.* 643-676.
Architecture Classification, 103-120.
ARCTIC OCEAN, *Geo. Cl.* 26, 38.
REGIONS, *Geo. Cl.* 25; *Homes Cl.* 382; *Topics Cl.* 605; *Zones Cl.* 674, 675.
AREQUIPA, *Geo. Cl.* 31; *Cities Cl.* 236, 239.
ARETHUSA, *Myth. Cl.* 513.
ARGENTINA, *Geo. Cl.* 31; *Homes Cl.* 384; *Topis Cl.* 610. See also *Zones Cl.* 643-676.
ARGONAUTS, *Myth. Cl.* 509.
ARGOS, GREECE, *Geo. Cl.* 48.
ARISTIDES, *Myth. Cl.* 199.
ARISTOTLE, *Biog. Cl.* 201.
ARIZONA, *Geo. Cl.* 18; *Races Cl.* 594. See also *Zones Cl.* 643-676.
ARMOR, *Gen. Hist. Cl.* 333.
ARMOUR, PHILLIP D., *Biog. Cl.* 144.
ARMSTRONG, GEN., *Biog. Cl.* 149.
ARNO RIVER, *Geo. Cl.* 46; *Cities Cl.* 240; *Phys. Geo. Cl.* 542.
ARNOLD, BENEDICT, *Biog, Cl.* 132.
SIR EDWIN, *Liter. Cl.* 457.
ART AND ARCHITECTURE, *Eng. Comp. Cl.* 300; Buildings, *Civ. Bett. Cl.* 266; Regularity and irregularity, *Civ. Bett. Cl.* 283.

ARTEMIS, *Myth. Cl.* 500.
ARTHUR, KING, *Myth. Cl.* 514.
ASCHAM, ROGER, *Biog. Cl.* 163.
ASH, VOLCANIC, *Nature Cl.* 528; *Phys. Geo. Cl.* 559.
ASIA, *Geo. Cl.* 53; *Biog. Cl.* 202; *Child Cl.* 229; *Gen. Hist. Cl.* 330, 335; *Amer. Hist. Cl.* 370; *Homes Cl.* 392; *Phys. Geo. Cl.* 554; *Races Cl.* 592; *Topics Cl.* 616. See also *Zones Cl.* 643-676.
ASIA MINOR, *Geo. Cl.* 53; *Topics Cl.* 616.
ASO SAN, *Geo. Cl.* 61; *Geol. Cl.* 323; *Phys. Geo. Cl.* 558.
ASS, see under Burros.
ASSUAN DAM, *Geo. Cl.* 50; *Eng. Comp. Cl.* 303.
ATHENA, *Myth. Cl.* 499.
ATHENS, *Geo. Cl.* 47; *Cities Cl.* 234, 237, 243; *Civ. Bett. Cl.* 257; *Eng. Comp. Cl.* 289; *Gen. Hist. Cl.* 329.
ATMOSPHERE, *Geol. Cl.* 316.
ATWOOD, WALLACE W., Classification by, 535-566.
AUCKLAND, N. Z., *Geo. Cl.* 62; *Eng. Comp. Cl.* 305.
AUDUBON, JOHN JAMES, *Biog. Cl.* 135.
AUGUSTUS, *Biog. Cl.* 193.
AUKS, *Animals Cl.* 83; *Eng. Comp. Cl.* 309; *Nature Cl.* 521.
AUSTRALIA, *Geo. Cl.* 61; *Child Cl.* 229; *Eng. Comp. Cl.* 298; *Homes Cl.* 395; people of, *Races Cl.* 591. See also *Zones Cl.* 643-676.
AUSTRALASIA, *Geo. Cl.* 61; *Topics Cl.* 619.
AUSTRIA, *Geo. Cl.* 47; *Biog. Cl.* 177; *Child Cl.* 228; *Gen. Hist. Cl.* 331; *Homes Cl.* 389; *Races Cl.* 595; *Topics Cl.* 612. See also *Zones Cl.* 643-676.
AUTHORS, *Liter. Cl.*, American 431; English 457; non-English-speaking countries, 481.
AUTOMOBILES, *Trans. Cl.* 634.
AYR, SCOTLAND, *Geo. Cl.* 35; *Eng. Comp. Cl.* 298.
AZTEC ARCHITECTURE, *Archit. Cl.* 115.
BAALBEK, *Geo. Cl.* 54; *Eng. Comp. Cl.* 311.
BABYLON, *Geo. Cl.* 55; *Biog. Cl.* 202; *Gen. Hist. Cl.* 329.
BABYLONIAN ARCHITECTURE, *Archit. Cl.* 115; myths, *Myth. Cl.* 515.
BACCHUS, *Myth. Cl.* 506.
BACON, SIR FRANCIS, *Biog. Cl.* 165.
BAGDAD, *Geo. Cl.* 55; *Child Cl.* 228; *Eng. Comp. Cl.* 289.
BAKER, EMILIE KIP, Classification by, 495-516.
BALBOA, *Biog. Cl.* 158, 190; *Amer. Hist. Cl.* 349.
BALLOONS, *Trans. Cl.* 641.
BAMBERG, *Geo. Cl.* 40.
BAMBOO, *Geo. Cl.* 58, 60; *Agri. Cl.* 77; *Bot. Cl.* 216; *Eng. Comp. Cl.* 306; *Man. Tr. Cl.* 489; *Nature Cl.* 524, 527; *Prod. & Indus. Cl.* 586.
BANANAS, *Geo. Cl.* 22, 23, 27, 28, 29; *Agri. Cl.* 68, 72, 73; *Bot. Cl.* 217; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 413; *Nature Cl.* 524; *Prod. & Indus. Cl.* 571.

BANCROFT, GEORGE, *Biog. Cl.* 136.
BANYAN TREE, *Geo. Cl.* 56; *Eng. Comp. Cl.* 306.
BARBAROSSA, FREDERICK, *Biog. Cl.* 178.
BARLEY, *Geo. Cl.* 40, 61; *Bot. Cl.* 217; *Eng. Comp. Cl.* 308; *Nature Cl.* 527; *Prod. & Indus. Cl.* 570.
BARR, AMELIA, *Liter. Cl.* 431.
BARRANQUILLA, *Geo. Cl.* 29; *Cities Cl.* 236, 237; *Eng. Comp. Cl.* 288.
BARREN LANDS, *Bot. Cl.* 212; *Phys. Geo. Cl.* 549, 550; *Zones Cl.* 649, 659.
BASALT ROCKS, *Nature Cl.* 529.
BASKETRY, *Man. Tr. Cl.* 487.
BATTLEFIELDS, FAMOUS, see *Gen. Hist. Cl.* 325-339; *Amer. Hist. Cl.* 341-372.
BATTLESHIPS, *Geo. Cl.* 5, 11; *Trans. Cl.* 636.
BAVARIA, *Geo. Cl.* 40; *Homes Cl.* 387.
BAYS, *Phys. Geo. Cl.* 560; *Trans. Cl.* 637.
BAZAARS, *Home Econ. Cl.* 407.
BEACHES, SEA, *Phys. Geo. Cl.* 559; *Topics Cl.* 619.
BEARS, *Animals Cl.* 83; *Eng. Comp. Cl.* 308; *Nature Cl.* 519.
BEAVERS, *Animals Cl.* 84; *Nature Cl.* 519.
BECKET, THOMAS À, *Biog. Cl.* 160.
BEDOUINS, *Geo. Cl.* 54; *Homes Cl.* 392; *Races Cl.* 600.
BEEF, *Agri. Cl.* 74; *Home Econ. Cl.* 410; *Prod. & Indus. Cl.* 576.
BEETHOVEN, *Biog. Cl.* 179.
BEET SUGAR, *Geo. Cl.* 7, 8, 15, 40; *Agri. Cl.* 67; *Home Econ. Cl.* 414; *Prod. & Indus. Cl.* 571.
BELFAST, *Geo. Cl.* 35, 36; *Cities Cl.* 234, 237, 247; *Civ. Bett. Cl.* 262; *Eng. Comp. Cl.* 288, 303.
BELGIAN CONGO, *Geo. Cl.* 51; *Homes Cl.* 391; *Races Cl.* 591; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
BELGIUM, *Geo. Cl.* 41; *Biog. Cl.* 181; *Child Cl.* 227; *Homes Cl.* 387; *Races Cl.* 595; *Topics Cl.* 612. See also *Zones Cl.* 643-676.
BENARES, *Geo. Cl.* 56; *Cities Cl.* 235, 240, 246; *Civ. Bett. Cl.* 277; *Eng. Comp. Cl.* 300.
BENNETT, CHARLES A., Classification by, 485-494.
BENNETT, E. H., Classification by, 249-284.
BERLIN, *Geo. Cl.* 39; *Cities Cl.* 233, 239, 243, 248; *Civ. Bett. Cl.* 254, 263, 270.
BERNE, *Geo. Cl.* 44; *Cities Cl.* 237, 240, 243; *Civ. Bett. Cl.* 279, 281; *Eng. Comp. Cl.* 289.
BETTWS-Y-COED, *Geo. Cl.* 34; *Eng. Comp. Cl.* 294; *Phys. Geo. Cl.* 537, 541, 544.
BEVERAGES, *Prod. & Indus. Cl.* 573. See also individual names.
BEVIER, ISABEL, Classification by, 401-426.
BIG TREE DISTRICT, *Geo. Cl.* 20; *Eng. Comp. Cl.* 306.
BILBAO, SPAIN, *Geo. Cl.* 43.
BINGEN, *Geo. Cl.* 40; *Cities Cl.* 239; *Liter. Cl.* 472.

BINOCULAR VISION ix
Biography Classification, 121-210.
BIRDS, *Eng. Comp. Cl.* 309; *Nature Cl.* 521. See also *Animals Cl.* 81-102.
BISMARCK, *Biog. Cl.* 180.
BISON, *Animals Cl.* 84; *Eng. Comp. Cl.* 308.
BJÖRNSON, BJÖRNSTJERNE, *Biog. Cl.* 175.
BLAINE, JAMES G., *Biog. Cl.* 143.
BLANKET WEAVING, *Geo. Cl.* 18; *Home Econ. Cl.* 425; *Man. Tr. Cl.* 487; *Prod. & Indus. Cl.* 579
BLOSSOMS, *Nature Cl.* 523.
BOATS, *Man. Tr. Cl.* 490; *Trans. Cl.* 635, 636, 637.
BOCCACCIO, *Biog. Cl.* 195.
BOER WAR, *Geo. Cl.* 52; *Gen. Hist. Cl.* 335, 337.
BOG, PEAT, *Phys. Geo. Cl.* 565; *Prod. & Indus. Cl.* 581.
BOLIVAR, SIMON, *Biog. Cl.* 158; statue of, *Civic Bett. Cl.* 279.
BOMBAY, *Geo. Cl.* 55; *Cities Cl.* 235, 238; *Civ. Bett. Cl.* 272.
BONDONE, GIOTTO DI, *Biog. Cl.* 196.
BOSPHORUS, THE, *Geo. Cl.* 48, 49; *Phys. Geo. Cl.* 561.
BOSSES, *Phys. Geo. Cl.* 559.
BOSTON, *Geo. Cl.* 3; *Cities Cl.* 233, 236, 242, 245; *Civ. Bett. Cl.* 259, 267, 273, 274, 278; *Amer. Hist. Cl.* 359.
Botany Classification, 211-220.
BOULDERS, *Nature Cl.* 531, 532; *Phys. Geo. Cl.* 556, 563.
BOURNE, HENRY E., Classification by, 325-339.
BOXER UPRISING, *Gen. Hist. Cl.* 335; *Amer. Hist. Cl.* 370.
BRAZIL, *Geo. Cl.* 29; *Gen. Hist. Cl.* 335; *Homes Cl.* 383; *Topics Cl.* 610. See also *Zones Cl.* 643-676.
BREADFRUIT, *Geo. Cl.* 27; *Agri. Cl.* 68, 72; *Bot. Cl.* 218; *Home Econ. Cl.* 413; *Nature Cl.* 524; *Prod. & Indus. Cl.* 572.
BREAD-MAKING, *Geo. Cl.* 54; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 407; *Prod. & Indus. Cl.* 570.
BRICK-MAKING, *Geo. Cl.* 55; *Eng. Comp. Cl.* 307; *Prod. & Indus. Cl.* 588.
BRIDGES, *Civ. Bett. Cl.* 280; *Man. Tr. Cl.* 493; *Trans. Cl.* 640.
BRIGHAM, ALBERT P., Classification by, 313-324.
BRITAIN, see Great Britain.
BRITISH AMERICA, *Geo. Cl.* 24; *Biog. Cl.* 157; *Child Cl.* 226; *Homes Cl.* 382; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
BRITISH COLUMBIA, *Geo. Cl.* 25.
BRITISH EMPIRE, *Gen. Hist. Cl.* 338.
BRITISH ISLES, *Geo. Cl.* 32; *Biog. Cl.* 159; *Homes Cl.* 384, 385; *Races Cl.* 595, 596, 597; *Topics Cl.* 612. See also *Zones Cl.* 643-676.
BRITISH POSSESSIONS, see under Colonies.
BRITTANY, *Geo. Cl.* 42; *Eng.*

Comp. Cl. 304; *Races Cl.* 597.
BROOKS, PHILLIPS, *Biog. Cl.* 145.
BROWNING, ELIZABETH, *Biog. Cl.* 170; *Liter. Cl.* 458.
ROBERT, *Biog. Cl.* 171; *Liter. Cl.* 457.
BRUCE, ROBERT, *Biog. Cl.* 161.
BRUSSELS, *Geo. Cl.* 41; *Cities Cl.* 234, 239, 243; *Civ. Bett. Cl.* 270; *Eng. Comp. Cl.* 301.
BRUTUS, *Biog. Cl.* 193.
BRYAN, WILLIAM J., *Biog. Cl.* 155.
BRYANT, WILLIAM CULLEN, *Biog. Cl.* 136; *Liter. Cl.* 431.
BRYCE, JAMES, *Biog. Cl.* 174.
BUDDHA, *Biog. Cl.* 207; *Cities Cl.* 246; *Myth. Cl.* 516; images of, *Geo. Cl.* 57.
BUENOS AIRES, *Geo. Cl.* 31; *Cities Cl.* 233, 237, 243; *Civ. Bett. Cl.* 268, 274.
BUFFALOES, *Animals Cl.* 84; *Nature Cl.* 519; *Eng. Comp. Cl.* 308; use of, *Nature Cl.* 529; *Trans. Cl.* 631.
BUILDINGS, *Archit. Cl.* 115; *Civ. Bett. Cl.* 266; *Gen. Hist. Cl.* 328; farm, *Agri. Cl.* 78; Government, *Archit. Cl.* 118; wooden, *Man. Tr. Cl.* 491; construction of, *Man. Tr. Cl.* 489; public, see *Zones Cl.* 643-676.
BULL FIGHT, *Geo. Cl.* 43.
BULLOCKS, *Animals Cl.* 88; *Eng. Comp. Cl.* 309; *Nature Cl.* 519; use of, *Trans. Cl.* 631.
BULWER-LYTTON, *Liter. Cl.* 458.
BUNKER HILL, *Geo. Cl.* 3; *Civ. Bett. Cl.* 278; *Eng. Comp. Cl.* 287; *Amer. Hist. Cl.* 359.
BURDEN-BEARERS, *Trans. Cl.*, animal 630; human 627.
BURKE, EDMUND, *Biog. Cl.* 167; *Liter. Cl.* 458.
BURMA, *Geo. Cl.* 57; *Child Cl.* 229; *Homes Cl.* 393; *Topics Cl.* 618; architecture of, *Archit. Cl.* 115; people of, *Races Cl.* 592. See also *Zones Cl.* 643-676.
BURNS, ROBERT, *Biog. Cl.* 168; *Liter. Cl.* 458; home of, *Geo. Cl.* 35; *Homes Cl.* 396.
BURROS, *Animals Cl.* 85; *Eng. Comp. Cl.* 308; *Nature Cl.* 519; use of, *Trans. Cl.* 630.
BURROUGHS, JOHN, Classification by, 81-102.
BUTLER, BENJ. F., *Biog. Cl.* 141.
BUTTER, *Geo. Cl.* 6, 38, 54; *Agri. Cl.* 75; *Home Econ. Cl.* 409; *Prod. & Indus. Cl.* 575.
BUTTES, *Phys. Geo. Cl.* 551.
BYRON, *Biog. Cl.* 169; *Liter. Cl.* 459.
BYZANTINE ARCHITECTURE, *Archit. Cl.* 109, 110.
BYZANTIUM, see Constantinople, *Geo. Cl.* 48; *Gen. Hist. Cl.* 329.
CABOTS, THE, *Amer. Hist. Cl.* 347.
CACAO, *Geo. Cl.* 27, 29; *Agri. Cl.* 71; *Home Econ. Cl.* 414; *Nature Cl.* 523, 524; *Prod. & Indus. Cl.* 573. See also Cocoa, Chocolate.

CADIZ, *Geo. Cl.* 43; *Cities Cl.* 236, 237; *Civ. Bett. Cl.* 253.
CÆSAR, JULIUS, *Biog. Cl.* 160, 193; *Liter. Cl.* 479.
CAIRO, *Geo. Cl.* 49; *Cities Cl.* 235, 240, 243, 245, 246; *Civ. Bett. Cl.* 265.
CALCUTTA, *Geo. Cl.* 56; *Cities Cl.* 233, 238, 246; *Civ. Bett. Cl.* 265.
CALIFORNIA, *Geo. Cl.* 19; *Child Cl.* 226; *Homes Cl.* 380. See also *Zones Cl.* 643-676.
CALHOUN, JOHN C., *Biog. Cl.* 135.
CALVIN, JOHN, *Biog. Cl.* 183.
CAMELS, *Animals Cl.* 86; *Eng. Comp. Cl.* 308; *Nature Cl.* 519, 529; use of, *Trans. Cl.* 631.
CANADA, *Geo. Cl.* 24; *Biog. Cl.* 157; *Child Cl.* 226; *Amer. Hist. Cl.* 359; *Homes Cl.* 382; *Phys. Geo. Cl.* 552; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
CANADIAN ROCKIES, *Geo. Cl.* 25.
CANALS, *Topics Cl.* 619; *Trans. Cl.* 638; canal boats, *Trans. Cl.* 635; canal cities, *Cities Cl.* 241; canal locks, *Trans. Cl.* 638.
CANE SUGAR, *Geo. Cl.* 12, 28, 30; *Agri. Cl.* 66, 67, 71; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 415; *Nature Cl.* 527; *Prod. & Indus. Cl.* 571.
CANOES, *Trans. Cl.* 635.
CANTERBURY, ENGLAND, *Geo. Cl.* 33; *Archit. Cl.* 111; *Cities Cl.* 239, 245.
CANTON, CHINA, *Geo. Cl.* 58; *Cities Cl.* 233, 238; *Eng. Comp. Cl.* 289, 305.
CANYON, GRAND, *Geo. Cl.* 19; *Eng. Comp. Cl.* 288.
CANYONS, *Nature Cl.* 530; *Phys. Geo. Cl.* 545; *Topics Cl.* 619.
CAPE TOWN, *Geo. Cl.* 52; *Cities Cl.* 236, 237, 242, 243, 247; *Civ. Bett. Cl.* 265.
CAPES, *Phys. Geo. Cl.* 562; *Topics Cl.* 619.
CARABOA, see under Buffalo.
CARACAS, *Geo. Cl.* 28; *Cities Cl.* 236, 240, 243; *Civ. Bett. Cl.* 279; *Eng. Comp. Cl.* 298.
CARAVANS, *Trans. Cl.* 632.
CARLYLE, THOMAS, *Biog. Cl.* 170; *Liter. Cl.* 466.
CARNEGIE, ANDREW, *Biog. Cl.* 146.
CARRARA, *Geo. Cl.* 46; quarries, *Man. Tr. Cl.* 491; *Prod. & Indus. Cl.* 585.
CARRIAGES, ODD, *Trans. Cl.* 628.
CARRIERS OF BURDENS, *Trans. Cl.*, animal 630; human 627.
CARTIER, JACQUES, *Biog. Cl.* 127, 184; *Amer. Hist. Cl.* 351.
CASHMERE, VALE OF, *Geo. Cl.* 55.
CASTLES, *Archit. Cl.* 116. See also *Topics Cl.* 603-619.
CASTOR AND POLLUX, *Myth. Cl.* 511.
CATANIA, *Geo. Cl.* 47; *Cities Cl.* 234, 237.
CATHEDRALS, *Archit. Cl.* 117.

See also *Topics Cl.* 603-619.
CATO, *Biog. Cl.* 193.
CATS, *Animals Cl.* 86; *Nature Cl.* 519.
CATTLE, *Agri. Cl.* 74; *Animals Cl.* 87; *Nature Cl.* 519; *Eng. Comp. Cl.* 308; use of, *Trans. Cl.* 631.
CAUCASIAN PEOPLE, *Races Cl.* 595, 601.
CAUSEWAY, GIANT'S, *Geo. Cl.* 36; *Eng. Comp. Cl.* 298.
CAVES, *Nature Cl.* 530; *Phys. Geo. Cl.* 557; *Topics Cl.* 619.
CEDARS OF LEBANON, *Geo. Cl.* 54; *Nature Cl.* 524.
CELTIC PEOPLE, *Races Cl.* 596; myths, *Myth. Cl.* 513.
CENTRAL AMERICA, *Geo. Cl.* 27; *Biog. Cl.* 156; *Topics Cl.* 606.
CENTRAL WESTERN STATES, *Geo. Cl.* 13; *Topics Cl.* 608; life in, *Homes Cl.* 379. See also *Zones Cl.* 643-676.
CERES, *Myth. Cl.* 505.
CEYLON, *Geo. Cl.* 57, 58; *Child Cl.* 229; *Homes Cl.* 393; *Races Cl.* 602; *Topics Cl.* 617. See also *Zones Cl.* 643-676.
CHAIRS, WHEEL, *Trans. Cl.* 628.
CHAMBERLAIN, JOSEPH, *Biog. Cl.* 174.
CHAMONIX VALLEY, *Geo. Cl.* 45; *Eng. Comp. Cl.* 295.
CHAMPS ELYSEES, *Geo. Cl.* 41; *Civ. Bett. Cl.* 264.
CHAMPLAIN, SAMUEL, *Biog. Cl.* 127, 185; *Amer. Hist. Cl.* 352.
CHANDLER, J. A. C., Classification by, 231-248.
CHANNEL, ENGLISH, *Geo. Cl.* 33, 42.
CHARLEMAGNE, *Biog. Cl.* 183.
CHARLES VIII., *Biog. Cl.* 184; XII., *Biog. Cl.* 175.
CHARTERS, W. W., Classification by, 427-484.
CHARYBDIS, *Geo. Cl.* 47; *Myth. Cl.* 509.
CHAUCER, *Biog. Cl.* 162; *Liter. Cl.* 466.
CHICAGO, *Geo. Cl.* 15; *Cities Cl.* 233, 237, 242, 246; *Civ. Bett. Cl.* 260.
Child Life Classification, 221-230.
CHILI, *Geo. Cl.* 31; *Topics Cl.* 610. See also *Zones Cl.* 643-676.
CHIMPANZEES, *Animals Cl.* 83.
CHINA, *Geo. Cl.* 58; *Biog. Cl.* 207; *Child Cl.* 229; *Amer. Hist. Cl.* 370; *Homes Cl.* 394; *Topics Cl.* 617; architecture of, *Archit. Cl.* 115; people of, *Races Cl.* 592. See also *Zones Cl.* 643-676.
CHOCOLATE, *Home Econ. Cl.* 413. See also Cacao, Cocoa.
CHRISTIAN IV., *Biog. Cl.* 175.
CHRISTIANIA, *Geo. Cl.* 36; *Cities Cl.* 234, 237, 243; *Civ. Bett. Cl.* 262.
CHUKIANG RIVER, *Geo. Cl.* 58; *Phys. Geo. Cl.* 546.
CHURCHES, *Archit. Cl.* 117.
CHURNING BUTTER, *Geo. Cl.* 6, 54; *Agri. Cl.* 75; *Home Econ. Cl.* 409; *Prod. & Indus. Cl.* 575.
CICERO, *Biog. Cl.* 192.

CIGAR-MAKING, *Geo. Cl.* 28; *Prod. & Indus. Cl.* 588.
CIRQUE, GLACIAL, *Phys. Geo. Cl.* 564.
Cities and City Life Classification, 231-248.
CITIES OF BRITISH EMPIRE, *Gen. Hist. Cl.* 338; city homes, *Homes Cl.* 399; city planning, *Civ. Bett. Cl.* 250; capital city, *Homes Cl.* 378. See also *Topics Cl.* 603-619; *Zones Cl.* 643-676.
CITRON, *Geo. Cl.* 28; *Agri. Cl.* 68, 72; *Bot. Cl.* 218; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 413; *Nature Cl.* 524, 527; *Prod. & Indus. Cl.* 572.
Civic Betterment Classification, 249-284. For relative topics see *Archit. Cl.* 103; *Cities Cl.* 231; *Eng. Comp. Cl.* 285; *Homes Cl.* 373.
CIVIL WAR (U. S.), *Amer. Hist. Cl.* 365.
CLARENDON, LORD, *Amer. Hist. Cl.* 357.
CLARKE EXPLORATIONS, *Amer. Hist. Cl.* 361.
CLAY, *Nature Cl.* 528, 529. See also clay pits, *Phys. Geo. Cl.* 565; porcelain, *Prod. & Indus. Cl.* 584; pottery, *Man. Tr. Cl.* 488.
CLAY, HENRY, *Biog. Cl.* 134.
CLEMENS, SAMUEL L. (Mark Twain), *Liter. Cl.* 432.
CLEOPATRA, *Biog. Cl.* 202.
CLEVELAND, GROVER, *Biog. Cl.* 146.
CLIFFS, *Phys. Geo. Cl.* 555; *Topics Cl.* 620.
CLIMATE, *Topics Cl.* 621. See also *Zones Cl.* 643-676.
CLOISONNE WARE, *Geo. Cl.* 60; *Eng. Comp. Cl.* 308; *Home Econ. Cl.* 426; *Prod. & Indus. Cl.* 584.
CLOTH WEAVING, *Geo. Cl.* 24; *Man. Tr. Cl.* 487; *Prod. & Indus. Cl.* 577-580.
CLOTHING, MATERIALS FOR, *Home Econ. Cl.* 419; *Prod. & Indus. Cl.* 577-580.
CLOUDS, *Nature Cl.* 531; *Topics Cl.* 620; view above, *Phys. Geo. Cl.* 566.
COAL, *Geo. Cl.* 9, 36; *Home Econ. Cl.* 424; *Nature Cl.* 527, 529; geologic origin of, *Geol. Cl.* 318, 321; Mining, *Prod. & Indus. Cl.* 581.
COASTS AND COAST LINE, *Phys. Geo. Cl.* 559; *Topics Cl.* 620; coast cities, *Cities Cl.* 236, 238.
COCKS, *Animals Cl.* 91.
COCOA, *Geo. Cl.* 27; *Bot. Cl.* 218; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 414; *Nature Cl.* 527. See also Cacao, Chocolate.
COCOANUTS, *Geo. Cl.* 12, 22; *Agri. Cl.* 68, 71; *Eng. Comp. Cl.* 306; *Nature Cl.* 523; *Prod. & Indus. Cl.* 573; cocoanut palms, *Geo. Cl.* 12, 23; *Bot. Cl.* 217; *Nature Cl.* 524.
COCOONS (silk), see under Silk Worms.
CODFISH, *Geo. Cl.* 3; *Home Econ. Cl.* 412; *Prod. & Indus. Cl.* 575.
COFFEE, *Geo. Cl.* 25, 51, 58; *Agri. Cl.* 71; *Bot. Cl.* 218;

Home Econ. Cl. 414; *Nature Cl.* 523, 527; *Prod. & Indus. Cl.* 573.
COG RAILWAYS, *Trans. Cl.* 633.
COLERIDGE, SAMUEL, *Liter. Cl.* 466.
COLISEUM, ROME, *Geo. Cl.* 46; *Archit. Cl.* 108; *Civ. Bett. Cl.* 272; *Eng. Comp. Cl.* 302.
COLOGNE, *Geo. Cl.* 40; *Cities Cl.* 234, 239; *Civ. Bett. Cl.* 254, 268; *Eng. Comp. Cl.* 301.
COLOMBIA, *Geo. Cl.* 29; *Child Cl.* 226; *Homes Cl.* 383; *Races Cl.* 599; *Topics Cl.* 611. See also *Zones Cl.* 643-676.
COLONIAL ARCHITECTURE, *Archit. Cl.* 113; history, *Gen. Hist. Cl.* 333; *Amer. Hist. Cl.* 341-362.
COLONIES: AMERICAN, see Alaska, Hawaiian Is., Panama, Philippine Is., Porto Rico, Samoa.
BRITISH, see Australia, British East Africa, British South Africa, Canada, Ceylon, Fiji Is., Gibraltar, India, Jamaica, New Zealand, Tasmania, Rhodesia.
BELGIAN, see Belgian Congo.
FRENCH, see Algeria, Martinique.
GERMAN, see German East Africa.
PORTUGUESE, see Madeira Is.
TURKISH, see Eypt.
COLORADO, *Geo. Cl.* 17; *Homes Cl.* 379. See also *Zones Cl.* 643-676.
COLUMBIA, DISTRICT OF, *Geo. Cl.* 10. See also *Zones Cl.* 643-676.
COLUMBIA RIVER, *Geo. Cl.* 20; *Phys. Geo. Cl.* 541.
COLUMBUS, CHRISTOPHER, *Biog. Cl.* 127, 196; *Amer. Hist. Cl.* 346; *Liter. Cl.* 439.
EUROPE IN TIME OF, *Amer. Hist. Cl.* 343.
COMMERCE, *Topics Cl.* 620. See also *Zones Cl.* 643-676 and other references in *Topics Cl.* 603-619.
Composition, English, Classification, 285-312.
CONCORD (MASS.), *Geo. Cl.* 3; *Civic Bett. Cl.* 278; *Amer. Hist. Cl.* 359.
CONES, VOLCANIC, *Phys. Geo. Cl.* 557.
CONFUCIUS, *Biog. Cl.* 207.
CONGO, BELGIAN, *Geo. Cl.* 51; *Homes Cl.* 391; *Races Cl.* 591; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
CONNOR, RALPH (Rev. Chas. W. Gordon), *Biog. Cl.* 157; *Liter. Cl.* 432.
CONSTANTINE, EMPEROR, *Biog. Cl.* 194.
CONSTANTINOPLE, *Geo. Cl.* 48; *Child Cl.* 228; *Cities Cl.* 233, 237, 243, 245; *Gen. Hist. Cl.* 329, 331, 332.
CONSTRUCTION, *Eng. Comp. Cl.* 302; bridge, *Man. Tr. Cl.* 493; building, *Man. Tr. Cl.* 489; pier, *Archit. Cl.* 119.
CONSTRUCTIVE AGENCIES, *Eng. Comp. Cl.* 318; *Nature Cl.* 531.
CONWAY, WALES, *Geo. Cl.* 34; *Gen. Hist. Cl.* 332, 336.

COOPER, JAMES FENIMORE, *Liter. Cl.* 433.
PETER, *Biog. Cl.* 136.
COPENHAGEN, *Geo. Cl.* 38; *Cities Cl.* 234, 237, 243; *Civ. Bett. Cl.* 253, 276, 281; *Eng. Comp. Cl.* 289.
COPPER, *Geo. Cl.* 15, 18; *Man. Tr. Cl.* 492; *Prod. & Indus. Cl.* 583; geologic origin of, *Geol. Cl.* 321.
CORINTH, *Geo. Cl.* 48; Corinthian architecture, *Archit. Cl.* 108.
CORK, *Geo. Cl.* 43; *Agri. Cl.* 77; *Nature Cl.* 524; *Prod. & Indus. Cl.* 586; cork oak, *Nature Cl.* 524.
CORN, *Geo. Cl.* 14; *Agri. Cl.* 67, 69; *Bot. Cl.* 217; *Eng. Comp. Cl.* 306; *Nature Cl.* 527; *Prod. & Indus. Cl.* 570.
CORONADO, *Amer. Hist. Cl.* 350.
CORTEZ, HERNANDO, *Biog. Cl.* 157, 191; *Gen. Hist. Cl.* 333; *Amer. Hist. Cl.* 350.
COSTA RICA, *Geo. Cl.* 27; *Homes Cl.* 383; *Amer. Hist. Cl.* 347; *Topics Cl.* 606. See also *Zones Cl.* 643-676.
COSTUMES, *Home Econ. Cl.* 422.
COTTAGE ARCHITECTURE, *Archit. Cl.* 116.
COTTON, GATHERING, *Geo. Cl.* 12, 30; *Home Econ. Cl.* 419; *Prod. & Indus. Cl.* 577; manufacture and transportation, *Geo. Cl.* 11, 13; *Agri. Cl.* 78; *Home Econ. Cl.* 419; *Prod. & Indus. Cl.* 577; cotton gin, *Geo. Cl.* 13; cotton seed, *Nature Cl.* 523. See also *Agri. Cl.* 72; *Nature Cl.* 527.
COUNTRY HOMES, *Homes Cl.* 398; roads, *Agri. Cl.* 79.
COWPER, WILLIAM, *Liter. Cl.* 466.
COWS, *Eng. Comp. Cl.* 308, 309; *Prod. & Indus. Cl.* 574. See also Cattle, *Animals Cl.* 87; *Nature Cl.* 519; also Beef, Milk.
CRANES (mechanical), *Trans. Cl.* 632.
CRATERS, GEYSER, *Phys. Geo. Cl.* 557; volcano, *Phys. Geo. Cl.* 558.
CRAWFORD, FRANCIS MARION, *Biog. Cl.* 153; *Liter. Cl.* 433.
CREVASSES, *Phys. Geo. Cl.* 563.
CROCODILES, *Animals Cl.* 32.
CROMWELL, OLIVER, *Biog. Cl.* 166.
CROPS, *Agri. Cl.*, planting and cultivation, 67; harvesting and preparing for market, 69; farm crops, 67; marketing farm crops, 72.
CRUSADES, *Gen. Hist. Cl.* 332.
CUBA, *Geo. Cl.* 27; *Amer. Hist. Cl.* 346; *Homes Cl.* 383; *Races Cl.* 599; *Topics Cl.* 610. See also *Zones Cl.* 643-676.
CUZCO, *Geo. Cl.* 31; *Cities Cl.* 236, 240, 247.
CYCLOPS, *Myth. Cl.* 507.
Cyclopean architecture, *Archit. Cl.* 107.
DAIRYING, *Agri. Cl.* 74; *Prod. & Indus. Cl.* 574. See also Milk and Butter.
DAM, ASSUAN, *Geo. Cl.* 50.

DAMASCUS, *Geo. Cl.* 54; *Cities Cl.* 235, 240; *Civ. Bett. Cl.* 257.
DANTE, *Biog. Cl.* 195; *Liter. Cl.* 481.
DANUBE RIVER, *Geo. Cl.* 40; *Cities Cl.* 240; *Phys. Geo. Cl.* 542.
DARIUS I., *Biog. Cl.* 203.
DARJEELING, *Geo. Cl.* 56; *Cities Cl.* 236, 240; *Eng. Comp. Cl.* 307.
DATE PALMS, *Geo. Cl.* 43; *Agri. Cl.* 68, 71; *Bot. Cl.* 217; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 413; *Prod. & Indus. Cl.* 572.
DAVID, KING (Biblical), *Biog. Cl.* 205; (Scotch), *Biog. Cl.* 161.
DAVIS, RICHARD HARDING, *Liter. Cl.* 433.
DEAD SEA, *Geo. Cl.* 53; *Phys. Geo. Cl.* 565.
DEER, *Animals Cl.* 88; *Eng. Comp. Cl.* 308; *Nature Cl.* 519.
DELFTSHAVEN, *Geo. Cl.* 40; *Cities Cl.* 238, 241; *Gen. Hist. Cl.* 333; *Amer. Hist. Cl.* 356.
DELHI, *Geo. Cl.* 56; *Cities Cl.* 235, 240, 244; *Eng. Comp. Cl.* 289.
DELPHI, *Geo. Cl.* 48; *Cities Cl.* 245.
DELTAS, *Nature Cl.* 531; *Phys. Geo. Cl.* 542.
DE MONTS, *Amer. Hist. Cl.* 352.
DEMOSTHENES, *Biog. Cl.* 201; *Liter. Cl.* 482.
DENMARK, *Geo. Cl.* 38; *Homes Cl.* 385; *Races Cl.* 596; *Topics Cl.* 613. See also *Zones Cl.* 643-676.
DENT DU MIDI, *Geo. Cl.* 45; *Eng. Comp. Cl.* 295.
DEPOSITS, *Geol. Cl.* 318, 319, 320; alluvial, *Nature Cl.* 531; glacial, *Nature Cl.* 532; ore, *Geol. Cl.* 321; organic, *Prod. & Indus. Cl.* 581; of springs, *Nature Cl.* 531.
DE QUINCEY, THOMAS, *Liter. Cl.* 467.
DERRICKS, *Trans. Cl.* 632.
DESCRIPTION, *Eng. Comp. Cl.* 292.
DESERT REGIONS, *Zones Cl.* 650, 659.
DESERTS, *Topics Cl.* 620; mountainous, *Phys. Geo. Cl.* 550; sandy, *Phys. Geo. Cl.* 549.
DE SOTO, FERDINAND, *Biog. Cl.* 127, 191; *Amer. Hist. Cl.* 350.
DESTRUCTIVE AGENCIES, *Geol. Cl.* 316; *Nature Cl.* 530.
DEWEY, ADMIRAL, *Geo. Cl.* 10; *Biog. Cl.* 147; *Homes Cl.* 381.
DIABASE ROCKS, *Geol. Cl.* 319.
DIAMONDS, *Geo. Cl.* 52; *Prod. & Indus. Cl.* 583; geologic origin of, *Geol. Cl.* 321.
DIANA, *Myth. Cl.* 500.
DIAZ, PORFIRIO, *Biog. Cl.* 158.
DICKENS, CHARLES, *Biog. Cl.* 172; *Liter. Cl.* 467.
DICOTYLEDONOUS PLANTS, *Bot. Cl.* 217.
DIEPPE, *Geo. Cl.* 42; *Cities Cl.* 237, 244; *Eng. Comp. Cl.* 289.

DIKES, *Geo. Cl.* 11, 12, 41; geologic, *Phys. Geo. Cl.* 559.
DIONYSUS (Bacchus), *Myth. Cl.* 506.
Directory of Places Classification, 1-62.
DISASTERS, *Eng. Comp. Cl.* 309.
DISCOVERERS AND EXPLORERS, *Biog. Cl.* 127; *Gen. Hist. Cl.* 333; *Amer. Hist. Cl.* 345-355.
DISRAELI, BENJAMIN, *Biog. Cl.* 170.
DISTRICT OF COLUMBIA, *Geo. Cl.* 10. See also *Zones Cl.* 643-676.
DIVIDES, *Phys. Geo. Cl.* 555; *Topics Cl.* 620.
DNIEPER RIVER, *Geo. Cl.* 39; *Phys. Geo. Cl.* 547.
DOCKS, *Trans. Cl.* 637.
DODGE, RICHARD ELWOOD, Classification by, 603-624.
DOGS, *Animals Cl.* 88; *Eng. Comp. Cl.* 308; *Nature Cl.* 519; use of, *Trans. Cl.* 630.
DOLL-MAKING, *Geo. Cl.* 40; *Eng. Comp. Cl.* 304; *Prod. & Indus. Cl.* 588.
DOMESTIC ECONOMY, see *Home Econ. Cl.* 401-426.
DONATELLO, *Biog. Cl.* 196.
DONKEYS, *Animals Cl.* 89; *Agri. Cl.* 76; *Nature Cl.* 519. See also Burros.
DORDRECHT, *Geo. Cl.* 41.
DORIC ARCHITECTURE, *Archit. Cl.* 107.
DOTHAN, PALESTINE, *Geo. Cl.* 53; *Eng. Comp. Cl.* 291.
DOVER, CLIFFS OF, *Geo. Cl.* 33; *Eng. Comp. Cl.* 298.
DOWNING, ELLIOT R., Classifications by, 211-220; 517-534.
DRAINAGE OF SOIL, *Agri. Cl.* 65.
DRAKE, SIR FRANCIS, *Biog. Cl.* 127, 164; *Amer. Hist. Cl.* 353.
DRESDEN, *Geo. Cl.* 40; *Cities Cl.* 234, 239, 243; *Civ. Bett. Cl.* 270.
DRESS, *Eng. Comp. Cl.* 303. See also *Zones Cl.* 643-676.
DROMEDARY, see Camels.
DRUIDS, *Myth. Cl.* 514.
DRYDEN, JOHN, *Liter. Cl.* 467.
DUBLIN, *Geo. Cl.* 35; *Cities Cl.* 234, 237; *Civ. Bett. Cl.* 262, 269; *Eng. Comp. Cl.* 288.
DUNBAR, PAUL L., *Liter. Cl.* 433.
DUNES, SAND, *Geo. Cl.* 3; *Agri. Cl.* 65; *Phys. Geo. Cl.* 540; *Topics Cl.* 620; Sand Dune Society, *Bot. Cl.* 219.
DURBAR IN INDIA, *Geo. Cl.* 56; *Eng. Comp. Cl.* 289.
DURHAM, ENG., *Geo. Cl.* 34; *Cities Cl.* 239; *Eng. Comp. Cl.* 301.
DUTCH ARCHITECTURE, *Archit. Cl.* 114; explorations and settlement, *Amer. Hist. Cl.* 355, 356.
DWELLINGS, *Man. Tr. Cl.* 489. See also *Archit. Cl.* 116; *Homes Cl.* 373-400; *Home Econ. Cl.* 416-419; *Topics Cl.* 603-624; *Zones Cl.* 643-676.
DYNAMICAL GEOLOGY, *Geol. Cl.* 314-319.
DYNAMOS, *Prod. & Indus. Cl.* 588; *Trans. Cl.* 633.

EARTHQUAKE, *Geol. Cl.* 315; *Nature Cl.* 530; *Phys. Geo. Cl.* 559; *Topics Cl.* 620.
EAST AFRICA, BRITISH, *Geo. Cl.* 50; *Homes Cl.* 391; *Topics Cl.* 605.
GERMAN, *Geo. Cl.* 51; *Child Cl.* 228; *Homes Cl.* 391; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
ECOLOGICAL CLASSIFICATION, *Bot. Cl.* 219.
Economics, Home, Classification, 401-426.
ECUADOR, *Geo. Cl.* 29; *Child Cl.* 236; *Gen. Hist. Cl.* 335; *Homes Cl.* 383; *Races Cl.* 599; *Topics Cl.* 611. See also *Zones Cl.* 643-676.
EDEN, REGION OF, *Geo. Cl.* 55; *Myth. Cl.* 516.
EDINBURGH, *Geo. Cl.* 34; *Cities Cl.* 234, 245; *Civ. Bett. Cl.* 252, 262, 269, 279; *Eng. Comp. Cl.* 288.
EDITORIAL BOARD.....lviii
EDWARD II., III., *Biog. Cl.* 162; the Confessor, *Biog. Cl.* 160.
EGYPT, *Geo. Cl.* 49; *Biog. Cl.* 201; *Child Cl.* 228; *Gen. Hist. Cl.* 329, 330; *Homes Cl.* 390; *Races Cl.* 601; *Topics Cl.* 605. See *Zones Cl.* 643-676.
EGYPTIAN ARCHITECTURE, *Archit. Cl.* 107; myths, *Myth. Cl.* 515.
EIFFEL TOWER, *Geo. Cl.* 41; *Archit. Cl.* 114, 119.
ELCHE, SPAIN, *Geo. Cl.* 43.
ELECTRIC POWER (dynamos), *Prod. & Indus. Cl.* 588; use of, *Trans. Cl.* 633.
ELEPHANTS, *Animals Cl.* 89; *Eng. Comp. Cl.* 309; *Nature Cl.* 519; use of, *Trans. Cl.* 632.
ELEVATED RAILWAYS, *Geo. Cl.* 5, 39; *Trans. Cl.* 633.
ELEVATORS, GRAIN, *Agri. Cl.* 72; *Prod. & Indus. Cl.* 569.
ELIJAH, *Biog. Cl.* 204.
ELIM, OASIS OF, *Geo. Cl.* 53.
ELIOT, CHAS. W., *Biog. Cl.* 145.
GEORGE, *Liter. Cl.* 467.
SIR JOHN, *Biog. Cl.* 166.
ELIZABETH, QUEEN, *Biog. Cl.* 163.
ELIZABETHAN ARCHITECTURE, *Archit. Cl.* 113.
EMERSON, R. W., *Biog. Cl.* 138; *Liter. Cl.* 434.
ENDICOTT, JOHN, *Biog. Cl.* 129.
ENGADINE, *Geo. Cl.* 45.
ENGLAND, *Geo. Cl.* 32; *Biog. Cl.* 159; *Gen. Hist. Cl.* 336; *Homes Cl.* 384; *Races Cl.* 595; *Topics Cl.* 612. See also *Zones Cl.* 643-676.
ENGLISH AUTHORS, *Liter. Cl.* 457; explorations, *Amer. Hist. Cl.* 353.
ENGLISH COLONIES, see list under Colonies.
English Composition Classification, 285-312.
ENKHUYSEN, *Geo. Cl.* 4.
EQUATORIAL ZONE, *Zones Cl.* 645.
EROSION, *Phys. Geo. Cl.* 537-540; lava, *Agri. Cl.* 65; rock, *Agri. Cl.* 64; wind, *Nature Cl.* 531.
ERRATIC BOULDERS, *Phys. Geo. Cl.* 563.
ERUPTIONS, VOLCANIC, *Phys. Geo. Cl.* 558.

ESQUIMAUX, *Homes Cl.* 382; *Races Cl.* 594.
ESTUARIES, *Phys. Geo. Cl.* 561; *Topics Cl.* 620.
ETHIOPIAN RACE, *Races Cl.* 591.
ETHNOLOGY, see *Races Cl.* 589-602.
ETNA, MOUNT, *Geo. Cl.* 47; *Phys. Geo. Cl.* 558.
EUPHRATES RIVER, *Geo. Cl.* 55; *Phys. Geo. Cl.* 542.
EUROPA, *Myth. Cl.* 511.
EUROPE, *Geo. Cl.* 32; *Biog. Cl.* 159; *Child Cl.* 226, 228; *Homes Cl.* 384; *Phys Geo. Cl.* 553; *Races Cl.* 595-598; *Topics Cl.* 612. See *Zones Cl.* 643-676.
EUROPE IN TIME OF COLUMBUS, *Amer. Hist. Cl.* 343.
EVANGELINE, *Liter. Cl.* 444.
EVANS, ADMIRAL, *Biog. Cl.* 152.
EXETER, *Geo. Cl.* 33; *Cities Cl.* 236, 239.
EXPLORERS, see under Discoverers and Explorers.
FACTORIES, *Civ. Bett. Cl.* 282; factory processes, *Prod. & Indus. Cl.* 577, 578.
FALLS, *Nature Cl.* 530; *Phys. Geo. Cl.* 543; *Topics Cl.* 620.
FAMOUS MEN, see *Biog. Cl.* 121-210; *Liter. Cl.* 427-485.
FANEUIL HALL, *Geo. Cl.* 3; *Archit. Cl.* 113; *Civ. Bett. Cl.* 267; *Liter. Cl.* 455.
FARADAY, MICHAEL, *Biog. Cl.* 170.
FARMING, see *Agri. Cl.* 63-79; *Home Econ. Cl.* 403-406; *Nature Cl.* 528, 529; *Prod. & Indus. Cl.* 587; *Zones Cl.* 643-676.
FARMS AND FARM BUILDINGS, *Agri. Cl.* 78.
FARRAGUT, ADMIRAL, *Biog. Cl.* 139.
FEATHERS, *Prod. & Indus. Cl.* 580.
FERDINAND AND ISABELLA, *Biog. Cl.* 189.
FERNS, TROPICAL, *Geo. Cl.* 23.
FERRY BOATS, *Trans. Cl.* 637.
FERTILIZATION OF SOIL, *Nature Cl.* 529. See also Irrigation.
FIELD, EUGENE, *Liter. Cl.* 434.
FIELD OF THE CLOTH OF GOLD, *Geo. Cl.* 41; *Eng. Comp. Cl.* 244; *Amer. Hist. Cl.* 344; *Gen. Hist. Cl.* 337.
FIJI ISLANDS, *Geo. Cl.* 62; *Eng. Comp. Cl.* 305; *Homes Cl.* 395; *Topics Cl.* 619.
FILIPINOS, *Races Cl.* 593.
FINISTÈRE, *Geo. Cl.* 42.
FIRAN, OASIS OF, *Geo. Cl.* 53; *Phys. Geo. Cl.* 550.
FIRE, FIGHTING, *Geo. Cl.* 7.
FIREPLACE, PRIMITIVE, *Prod. & Indus. Cl.* 581.
FIREWOOD, *Agri. Cl.* 77.
FISH, *Geo. Cl.* 3, 20, 21, 35; *Animals Cl.* 90; *Eng. Comp. Cl.* 309; *Home Econ. Cl.* 411; *Nature Cl.* 522; *Prod. & Indus. Cl.* 575. See also *Zones Cl.* 643-676.
FISHING BOATS, *Geo. Cl.* 41; *Prod. & Indus. Cl.* 575.
FISSURES, VOLCANIC, *Phys. Geo. Cl.* 558.
FJORDS, *Phys. Geo. Cl.* 561; *Topics Cl.* 620.
FLAVIUS, *Biog. Cl.* 205.
FLAX, *Geo. Cl.* 41; *Agri. Cl.*

70; *Bot. Cl.* 218; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 421; *Prod. & Indus. Cl.* 577.

FLOODS, *Geo. Cl.* 13, 14; *Topics Cl.* 620. See also *Zones Cl.* 643-676.

FLORENCE, *Geo. Cl.* 46; *Cities Cl.* 234, 240; *Civ. Bett. Cl.* 255, 272; *Eng. Comp. Cl.* 289, 302.

FLORIDA, *Geo. Cl.* 12; *Homes Cl.* 378. See also *Zones Cl.* 643-676.

FLOWERS, DETAILS OF, *Bot. Cl.* 214.

FOODS AND FOODSTUFFS, *Agri. Cl.* 66-73; *Home Econ. Cl.* 407; *Prod. & Indus. Cl.* 569-576.

FORD, PAUL L., *Liter. Cl.* 436.

FORDYCE, CHARLES, Classification by, 341-372.

FOREST, PETRIFIED, *Geo. Cl.* 18; *Eng. Comp. Cl.* 310; *Geol. Cl.* 322; *Phys. Geo. Cl.* 551.

FOREST PRODUCTS, *Agri. Cl.* 76; *Nature Cl.* 525; *Prod. & Indus. Cl.* 585.

FORESTS AND FORESTRY, *Nature Cl.* 525; *Topics Cl.* 620.

FORMATION, FRUIT, *Bot. Cl.* 215; *Nature Cl.* 523; Soil, *Agri. Cl.* 64; *Nature Cl.* 528.

FORT SUMTER, *Geo. Cl.* 11; *Eng. Comp. Cl.* 297; *Amer. Hist. Cl.* 366.

FORUM, ROMAN, *Geo. Cl.* 46; *Civ. Bett. Cl.* 255; *Eng. Comp. Cl.* 302; *Myth. Cl.* 513

FOX INDIANS, *Geo. Cl.* 14; *Amer. Hist. Cl.* 343; *Homes Cl.* 380; *Races Cl.* 594.

FRANCE, *Geo. Cl.* 41; *Biog. Cl.* 183; *Child Cl.* 227; *Gen. Hist. Cl.* 330; *Homes Cl.* 387; *Topics Cl.* 613. See also *Zones Cl.* 643-676.

FRANCIS I., *Biog. Cl.* 184.

FRANCIS JOSEPH, EMPEROR, *Biog. Cl.* 180.

FRANKLIN, BENJAMIN, *Biog. Cl.* 130.

FREDERICK THE GREAT, *Biog. Cl.* 178.

FREMONT, JOHN C., *Biog. Cl.* 141.

FRENCH COLONIES, see Algeria, Martinique; explorations, *Amer. Hist. Cl.* 351; Revolution, *Gen. Hist. Cl.* 334.

FROBISHER, SIR MARTIN, *Biog. Cl.* 127; *Amer. Hist. Cl.* 353.

FROST, *Nature Cl.* 531; *Phys. Geo. Cl.* 538, 539.

FRUIT FORMATION, *Bot. Cl.* 215; *Nature Cl.* 523; growing, harvesting and transportation, *Agri. Cl.* 68, 71; *Home Econ. Cl.* 412; *Prod. & Indus. Cl.* 571. See also *Zones Cl.* 643-676.

FUEL, *Agri. Cl.* 77; *Home Econ. Cl.* 424; *Prod. & Indus. Cl.* 581.

FUJIYAMA, *Geo. Cl.* 61; *Eng. Comp. Cl.* 289, 296; *Geol. Cl.* 320, 323; *Myth. Cl.* 507; *Phys. Geo. Cl.* 550, 555, 558, 566.

FULLER, MELVILLE W., *Biog. Cl.* 144.

FULTON, ROBERT, *Biog. Cl.* 134.

FUNCHAL, *Geo. Cl.* 44; *Cities Cl.* 236, 237; *Eng. Comp. Cl.* 289.
FURNESS ABBEY, *Geo. Cl.* 34; *Archit. Cl.* 111; *Eng. Comp. Cl.* 298; *Gen. Hist. Cl.* 332.
FURS, *Prod. & Indus. Cl.* 580.
GALATA, *Geo. Cl.* 48.
GALILEE, *Geo. Cl.* 54; *Eng. Comp. Cl.* 305.
GAME COCKS, *Animals Cl.* 91.
GANGES RIVER, *Geo. Cl.* 56; *Cities Cl.* 240; *Phys. Geo. Cl.* 546.
GANNETS, *Geo. Cl.* 24; *Animals Cl.* 91; *Eng. Comp. Cl.* 309; *Nature Cl.* 521.
GARDEN OF THE GODS, *Geo. Cl.* 17; *Phys. Geo. Cl.* 540.
GARDENS, *Nature Cl.* 528.
GARFIELD, JAS. A., *Biog. Cl.* 144.
GARIBALDI, *Biog. Cl.* 197.
GARRISON, WM. L., *Biog. Cl.* 139.
GEESE, *Animals Cl.* 91; *Nature Cl.* 521.
GENEVA, LAKE, *Geo. Cl.* 45; *Cities Cl.* 244; *Civ. Bett. Cl.* 269; *Eng. Comp. Cl.* 295.
General History Classification, 325-340.
GENNESARET PLAIN, *Geo. Cl.* 54.
Geographical Classification, 1-62.
Geography, Physical, Classification, 535-566.
Geology Classification, 313-324.
GEORGIA, *Geo. Cl.* 11; *Amer. Hist. Cl.* 357; *Child Cl.* 225; *Homes Cl.* 378. See *Zones Cl.* 643-676.
GERMAN COLONIES, see German East Africa.
GERMAN EAST AFRICA, *Geo. Cl.* 51; *Child Cl.* 228; *Homes Cl.* 391; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
GERMANY, *Geo. Cl.* 39; *Biog. Cl.* 177; *Child Cl.* 227; *Gen. Hist. Cl.* 330; *Homes Cl.* 386; *Races Cl.* 595; *Topics Cl.* 613. See also *Zones Cl.* 643-676.
GETTYSBURG, *Geo. Cl.* 9; *Eng. Comp. Cl.* 297; *Amer. Hist. Cl.* 366; *Liter. Cl.* 450.
GEYSERS, *Geo. Cl.* 17, 62; *Nature Cl.* 532; *Phys. Geo. Cl.* 557; *Topics Cl.* 620.
GIANT'S CAUSEWAY, *Geo. Cl.* 36; *Eng. Comp. Cl.* 298; *Geol. Cl.* 323; *Phys. Geo. Cl.* 537, 556, 559, 560, 561.
GIBRALTAR, *Geo. Cl.* 43; *Child Cl.* 227.
GIRAFFES, *Animals Cl.* 91; *Nature Cl.* 520.
GLACIAL CIRQUE, *Phys. Geo. Cl.* 564; deposits, *Nature Cl.* 532; drift, *Nature Cl.* 528; erosion, *Phys. Geo. Cl.* 539; lakes, *Phys. Geo. Cl.* 564; plains, *Phys. Geo. Cl.* 548; valley, *Nature Cl.* 530; wash, *Agri. Cl.* 65; *Phys. Geo. Cl.* 563.
GLACIERS, *Nature Cl.* 530; *Phys. Geo. Cl.* 562; *Topics Cl.* 614, 616, 620.
GLADSTONE, WM. E., *Biog. Cl.* 171.
GLASS-MAKING, *Geo. Cl.* 9, 10;

Home Econ. Cl. 425; *Prod. & Indus. Cl.* 584.
GNEISS, *Geol. Cl.* 321.
GOATS, *Animals Cl.* 92; *Eng. Comp. Cl.* 308; *Nature Cl.* 520; *Prod. & Indus. Cl.* 574; use of, *Trans. Cl.* 631.
GOES, *Geo. Cl.* 41; *Eng. Comp. Cl.* 304.
GOETHE, *Biog. Cl.* 179; *Liter. Cl.* 482.
GOLDFINCHES, *Animals Cl.* 92; *Eng. Comp. Cl.* 309; *Nature Cl.* 521.
GOLD INDUSTRY, *Geo. Cl.* 19, 21, 25, 52, 57, 62; *Prod. & Indus. Cl.* 583; geologic origin of, *Geol. Cl.* 321.
GOLDEN FLEECE, *Myth. Cl.* 509.
GOLDSMITH, OLIVER, *Biog. Cl.* 167; *Liter. Cl.* 468.
GOLDSMITHS (workmen), *Man. Tr. Cl.* 489.
GONDOLAS, *Trans. Cl.* 635.
GORDON, REV. CHAS. W., *Biog. Cl.* 157; *Liter. Cl.* 432.
CHAS. GEO., *Biog. Cl.* 173.
GORGES, *Nature Cl.* 530; *Phys. Geo. Cl.* 544; *Topics Cl.* 621.
GOTHIC ARCHITECTURE, *Archit. Cl.* 110.
GOVERNMENT BUILDINGS, *Archit. Cl.* 118.
GRADY, WILLIAM E., Classification by, 1-62.
GRÆCO-LATIN PEOPLE, *Races Cl.* 597.
GRAIN ELEVATORS, *Geo. Cl.* 15, 25; *Agri. Cl.* 72; *Home Econ. Cl.* 405; *Prod. & Indus. Cl.* 569.
GRAINS, *Agri. Cl.* 67, 69, 70, 72; *Bot. Cl.* 216; *Home Econ. Cl.* 407; *Prod. & Indus. Cl.* 569. See also *Zones Cl.* 643-676.
GRANADA, *Geo. Cl.* 43; *Cities Cl.* 236, 240; *Eng. Comp. Cl.* 295, 301.
GRAND CANYON, *Geo. Cl.* 19; *Eng. Comp. Cl.* 288; *Phys. Geo. Cl.* 237.
GRAND PRE, *Geo. Cl.* 24; *Eng. Comp. Cl.* 297; *Liter. Cl.* 444.
GRANITE QUARRIES, *Geo. Cl.* 4; *Eng. Comp. Cl.* 311; *Man. Tr. Cl.* 491; *Phys. Geo. Cl.* 565; *Prod. & Indus. Cl.* 585; granitic rocks, *Nature Cl.* 529.
GRANT, ULYSSES S., *Biog. Cl.* 142.
GRAPES, *Geo. Cl.* 43; *Agri. Cl.* 68, 72; *Bot. Cl.* 218; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 413; *Nature Cl.* 527; *Prod. & Indus. Cl.* 572.
GRASMERE, *Geo. Cl.* 34; *Biog. Cl.* 169; *Eng. Comp. Cl.* 298; *Liter. Cl.* 480.
GRASSES, *Man. Tr. Cl.* 489; *Nature Cl.* 523.
GRAY, THOMAS, *Liter. Cl.* 468.
GREAT BRITAIN, *Geo. Cl.* 32; *Biog. Cl.* 159; *Child Cl.* 226; *Gen. Hist. Cl.* 330, 336; *Homes Cl.* 384, 385; *Liter. Cl.* 457; *Races Cl.* 595, 596; *Topics Cl.* 612, 613. See also *Zones Cl.* 643-676.
GREAT LAKES STATES, *Geo. Cl.* 14; *Topics Cl.* 608. See also *Zones Cl.* 643-676.

GREAT MEN, see *Biog. Cl.* 121-210; *Liter. Cl.* 420-484.
GRECIAN ARCHITECTURE, *Archit. Cl.* 107; myths, *Myth. Cl.* 497.
GREECE, *Geo. Cl.* 47; *Biog. Cl.* 199; *Child Cl.* 228; *Gen. Hist. Cl.* 328, 329; *Homes Cl.* 390; *Races Cl.* 597; *Topics Cl.* 614. See also *Zones Cl.* 643-676.
GREELEY, HORACE, *Biog. Cl.* 140.
GREENLAND, *Geo. Cl.* 25, 26; *Homes Cl.* 382. See also *Zones Cl.* 643-676.
GREGORY, W. M., Classification by, 625-642.
GUADALQUIVIR RIVER, *Geo. Cl.* 43; *Cities Cl.* 239.
GUAYAQUIL, *Geo. Cl.* 29.
GULF STATES, *Geo. Cl.* 12; *Topics Cl.* 607. See also *Zones Cl.* 643-676.
GULLS, SEA, *Animals Cl.* 93; *Eng. Comp. Cl.* 309; *Nature Cl.* 521.
GUSTAVUS ADOLPHUS, *Biog. Cl.* 175.
GUTENBERG, JOHANN, *Biog. Cl.* 178.
GWALIOR, *Geo. Cl.* 56; *Homes Cl.* 393, 397, 398.
HADRIAN, EMPEROR, *Biog. Cl.* 194.
HAMILTON, ALEXANDER, *Biog. Cl.* 134.
HAMITIC PEOPLE, *Races Cl.* 601.
HANKOW, *Geo. Cl.* 58; *Cities Cl.* 235, 240.
HARBORS, *Phys. Geo. Cl.* 560; *Topics Cl.* 621; *Trans. Cl.* 637. See also other references in *Topics Cl.* 603-619.
HARRIS, ADA VAN STONE, Classification by, 373-400.
HARTE, BRET, *Biog. Cl.* 149; *Liter. Cl.* 436.
HARVESTING, *Agri. Cl.* 69-72; *Nature Cl.* 529. See also *Prod. & Indus. Cl.* 567-588.
HASTINGS, WARREN, *Biog. Cl.* 167.
HAVANA, *Geo. Cl.* 27, 28; *Cities Cl.* 234, 237, 243, 247; *Homes Cl.* 383.
HAWAIIAN ISLANDS, *Geo. Cl.* 23; *Phys. Geo. Cl.* 552; *Races Cl.* 601; *Topics Cl.* 609. See also *Zones Cl.* 643-676.
HAWTHORNE, NATHANIEL, *Biog. Cl.* 138; *Liter. Cl.* 436.
HAY, JOHN, *Biog. Cl.* 148.
HAYMAKING, *Geo. Cl.* 34, 37, 39; *Agri. Cl.* 70; *Eng. Comp. Cl.* 307; *Prod. & Indus. Cl.* 587. See also *Nature Cl.* 527.
HEAT BELTS, *Topics Cl.* 621. See also *Zones Cl.* 643-676.
HEBRAIC MYTHOLOGY, *Myth. Cl.* 515.
HEIDELBERG, *Geo. Cl.* 40; *Cities Cl.* 236, 239, 246; *Civ. Bett. Cl.* 254, 281; *Eng. Comp. Cl.* 295.
HEINE, HEINRICH, *Liter. Cl.* 482.
HEMANS, FELICIA, *Liter. Cl.* 468.
HEMP, *Geo. Cl.* 23, 24; *Agri. Cl.* 71, 73; *Bot. Cl.* 217; *Home Econ. Cl.* 421; *Nature Cl.* 527; *Prod. & Indus. Cl.* 577.
HENRY III., *Biog. Cl.* 161; IV., VI., VII., 162; VIII., 163.

HERA, *Myth. Cl.* 498.
HERCULES, *Myth. Cl.* 504.
HERMES, *Myth. Cl.* 499.
HERRING FISHERIES, *Geo. Cl.* 35; *Home Econ. Cl.* 412; *Prod. & Indus. Cl.* 575.
HIAWATHA, *Liter. Cl.* 442.
HIDES, *Agri. Cl.* 75; *Prod. & Indus. Cl.* 580. See also *Zones Cl.* 647.
HIGGINSON, THOS. W., *Biog. Cl.* 143.
HILLS, *Phys. Geo. Cl.* 550; *Topics Cl.* 621.
HIMALAYA MOUNTAINS, *Geo. Cl.* 56.
HINDU ARCHITECTURE, *Archit. Cl.* 115; myths, *Myth. Cl.* 515.
HIPPOPOTAMUS, *Animals Cl.* 94; *Nature Cl.* 520.
HISTORY, ANCIENT, *Gen. Hist. Cl.* 328.
History, General, Classification, 325-339.
History of America Classification (Political, Social and Economic), 341-372.
HOBSON, RICHMOND P., *Biog. Cl.* 156.
HOGS, *Agri. Cl.* 75; *Animals Cl.* 94; *Nature Cl.* 520.
HOLLAND, *Geo. Cl.* 40; *Biog. Cl.* 181; *Child Cl.* 227; *Gen. Hist. Cl.* 330; *Homes Cl.* 387; *Races Cl.* 595; *Topics Cl.* 614. See also *Zones Cl.* 643-676.
HOLMES, O. W., *Biog. Cl.* 140; *Liter. Cl.* 436.
HOLYROOD PALACE, *Geo. Cl.* 34; *Homes Cl.* 539.
HOMES, *Home Econ. Cl.* 416; *Topics Cl.* 621; *Zones Cl.* 643-676. See also other references in *Topics Cl.* 603-619.
Homes and Life of the People Classification, 373-400.
Home Economics Classification, 401-426.
HOMER, *Biog. Cl.* 199; *Liter. Cl.* 482.
HONG-KONG, *Geo. Cl.* 58; *Cities Cl.* 235, 238; *Gen. Hist. Cl.* 335.
HONOLULU, *Geo. Cl.* 23; *Cities Cl.* 235, 237, 243; *Civ. Bett. Cl.* 260.
HOOD, THOS., *Liter. Cl.* 468.
HOP CULTURE, *Geo. Cl.* 40, 62; *Agri. Cl.* 69; *Bot. Cl.* 217; *Nature Cl.* 527; *Prod. & Indus. Cl.* 574.
HOPI INDIANS, *Geo. Cl.* 18; *Amer. Hist. Cl.* 343; *Homes Cl.* 380; *Races Cl.* 594.
HORSES, *Agri. Cl.* 76; *Animals Cl.* 95; *Eng. Comp. Cl.* 308; *Nature Cl.* 520; use of, *Trans. Cl.* 628, 629.
HOSIC, JAMES FLEMING, Classification by, 285-312.
HOT SPRINGS, *Phys. Geo. Cl.* 557; *Topics Cl.* 621.
HOUSEHOLD ARTS, *Home Econ. Cl.* 416; science, *Home Econ. Cl.* 403.
HOUSES, *Home Econ. Cl.* 416. See also Cottages, and *Homes Cl.* 373-400.
HOWELLS, WM. D., *Biog. Cl.* 146; *Liter. Cl.* 437.
HUDSON, HENRY, *Biog. Cl.* 127, 165.
HUDSON RIVER, *Geo. Cl.* 5; *Cities Cl.* 239; *Eng. Comp.*

Cl. 287; *Amer. Hist. Cl.* 358; Valley, *Geo. Cl.* 6.
HUGO, VICTOR, *Biog. Cl.* 188; *Liter. Cl.* 483.
HUNTING, *Geo. Cl.* 33.
HUNTINGTON, ELLSWORTH, Classification by, 643-676.
HUXLEY, THOS. H., *Biog. Cl.* 173.
IBSEN, HENRIK, *Biog. Cl.* 175; *Liter. Cl.* 483.
ICEBERGS AND ICE FIELDS, *Nature Cl.* 531; *Phys. Geo. Cl.* 564; *Topics Cl.* 621; ice deposits, *Geol. Cl.* 319; ice river, *Nature Cl.* 531.
ICE INDUSTRY, *Geo. Cl.* 30; *Prod. & Indus. Cl.* 576.
IDOLS IN BURMA, *Geo. Cl.* 57; *Eng. Comp. Cl.* 311.
IGNEOUS ROCKS, *Geol. Cl.* 319.
ILLINOIS, *Geo. Cl.* 15; *Homes Cl.* 379. See also *Zones Cl.* 643-676.
IMMIGRANTS TO U. S., *Geo. Cl.* 5; station, *Civ. Bett. Cl.* 266.
INDEPENDENCE HALL, *Geo. Cl.* 9; *Archit. Cl.* 113; *Civ. Bett. Cl.* 267; *Eng. Comp. Cl.* 297; *Gen. Hist. Cl.* 334; *Amer. Hist. Cl.* 360.
INDIA, *Geo. Cl.* 55; *Biog. Cl.* 207; *Child Cl.* 229; *Homes Cl.* 393; *Races Cl.* 601; *Topics Cl.* 618. See also *Zones Cl.* 643-676.
INDIANS, AMERICAN, *Amer. Hist. Cl.* 343; *Homes Cl.* 380; *Races Cl.* 594.
INDUSTRIES, *Eng. Comp. Cl.* 311; *Gen. Hist. Cl.* 329; *Amer. Hist. Cl.* 371; *Home Econ. Cl.* 424; *Prod. & Indus. Cl.* 567-588. See also *Zones Cl.* 643-676.
Industries and Products Classification, 567-588.
INLETS, *Phys. Geo. Cl.* 561.
INNSBRUCK, *Geo. Cl.* 47; *Cities Cl.* 236, 240, 244; *Civ. Bett. Cl.* 264, 278; *Eng. Comp. Cl.* 299; *Gen. Hist. Cl.* 333.
INSECTS, *Nature Cl.* 522.
IONIC ARCHITECTURE, *Archit. Cl.* 108.
IRELAND, *Geo. Cl.* 35; *Biog. Cl.* 159; *Child Cl.* 227; *Gen. Hist. Cl.* 330; *Homes Cl.* 385; *Races Cl.* 596; *Topics Cl.* 612. See also *Zones Cl.* 643-676.
IRON INDUSTRY, *Geo. Cl.* 9, 14, 15, 16; *Man. Tr. Cl.* 492; *Prod. & Indus. Cl.* 582.
IRRAWADDY RIVER, *Geo. Cl.* 57; *Cities Cl.* 238.
IRRIGATION, *Geo. Cl.* 30, 50, 55; *Agri. Cl.* 66; *Nature Cl.* 529; *Prod. & Indus. Cl.* 587; *Topics Cl.* 621. See also *Zones Cl.* 643-676.
IRVING, WASHINGTON, *Biog. Cl.* 135; *Liter. Cl.* 438.
ISABELLA, QUEEN, *Biog. Cl.* 189.
ISLANDS, *Phys Geo. Cl.* 562; *Topics Cl.* 621.
ITALY, *Geo. Cl.* 45; *Biog. Cl.* 192; *Child. Cl.* 228; *Gen. Hist. Cl.* 328, 330; *Homes Cl.* 389; *Races Cl.* 597; *Topics Cl.* 614. See also *Zones Cl.* 643-676.
IVAN THE GREAT, *Biog. Cl.* 176.
IVORY, *Geo. Cl.* 50; *Nature Cl.*

522; *Prod. & Indus. Cl.* 587.
IXTACCIHUATL, MEXICO, *Geo. Cl.* 26; *Eng. Comp. Cl.* 294; *Phys. Geo. Cl.* 552.
JACKSON, HELEN HUNT, *Liter. Cl.* 446.
JAFFA, *Geo. Cl.* 53; *Cities Cl.* 236, 237; *Eng. Comp. Cl.* 305.
JALAPA, *Geo. Cl.* 26; *Cities Cl.* 240; *Eng. Comp. Cl.* 298.
JAMAICA, *Geo. Cl.* 28; *Child. Cl.* 226; *Homes Cl.* 383; *Topics Cl.* 610.
JAMES I., *Biog. Cl.* 165.
JAPAN, *Geo. Cl.* 59; *Biog. Cl.* 207; *Child Cl.* 229; *Gen. Hist. Cl.* 335; *Homes Cl.* 394; *Topics Cl.* 618. See also *Zones Cl.* 643-676.
JAPANESE ARCHITECTURE, *Archit. Cl.* 115; people, *Races Cl.* 592.
JASON, *Myth. Cl.* 509.
JAVA, *Geo. Cl.* 62; *Child Cl.* 229; *Homes Cl.* 395; *Topics Cl.* 619; people of, *Races Cl.* 593. See also *Zones Cl.* 643-676.
JEFFERSON, THOMAS, *Biog. Cl.* 133.
JERUSALEM, *Geo. Cl.* 53; *Cities Cl.* 236, 240, 245; *Civ. Bett. Cl.* 265; *Eng. Comp. Cl.* 289, 305; *Gen. Hist. Cl.* 332.
JESUITS, THE, *Amer. Hist. Cl.* 353.
JEWELS, *Prod. & Indus. Cl.* 583.
JINRIKISHAS, *Trans. Cl.* 628.
JOAN OF ARC, *Biog. Cl.* 184.
JOHANNESBURG, *Geo. Cl.* 52.
JOHNSON, DR. SAMUEL, *Liter. Cl.* 468.
JONAH, TOMB OF, *Geo. Cl.* 55.
JONSON, BEN, *Biog. Cl.* 166; *Liter. Cl.* 469.
JORDAN RIVER, *Geo. Cl.* 54; *Phys. Geo. Cl.* 542, 543.
JOSEPH, *Biog. Cl.* 204.
JOSHUA, *Biog. Cl.* 204.
JUDEA, *Geo. Cl.* 53.
JUAREZ, BENITO PABLO, *Biog. Cl.* 157.
JUDAS MACCABEUS, *Biog. Cl.* 205.
JUGGERNAUT, *Myth. Cl.* 516.
JUNGFRAU, *Geo. Cl.* 44; *Eng. Comp. Cl.* 295; *Phys. Geo. Cl.* 539, 554, 562, 563.
JUNO (HERA), *Myth. Cl.* 498.
JUPITER, *Myth. Cl.* 497.
KANDY, *Geo. Cl.* 57; *Cities Cl.* 240; *Eng. Comp. Cl.* 305.
KANGAROOS, *Animals Cl.* 96; *Eng. Comp. Cl.* 309; *Nature Cl.* 520.
KANSAS, *Geo. Cl.* 14. See also *Zones Cl.* 643-676.
KELLOGG, ELIJAH, *Liter. Cl.* 469.
KENTUCKY, *Geo. Cl.* 13. See also *Zones Cl.* 643-676.
KEROSENE, see Petroleum.
KIDD, CAPT. WM., *Biog. Cl.* 130, 166.
KIEF, *Geo. Cl.* 39.
KIKUYU PEOPLE, *Geo. Cl.* 50; *Eng. Comp. Cl.* 304; *Races Cl.* 591.
KILAUEA VOLCANO, *Geo. Cl.* 23; *Geol. Cl.* 320; *Phys. Geo. Cl.* 550, 558.
KILLARNEY, LAKES OF, *Geo. Cl.* 36; *Eng. Comp. Cl.* 294; *Phys. Geo. Cl.* 564.

KIMBERLEY MINES, *Geo. Cl.* 52; *Prod. & Indus. Cl.* 583.
KINCHINJANGA, *Geo. Cl.* 56; *Eng. Comp. Cl.* 295; *Phys. Geo. Cl.* 554.
KIPLING, RUDYARD, *Liter. Cl.* 469.
KIRKPATRICK, E. A., Classification by, 221-230.
KITCHENER, LORD, *Biog. Cl.* 174.
KLONDIKE, *Geo. Cl.* 25.
KNOWLES, SHERIDAN, *Liter. Cl.* 470.
KNOX, JOHN, *Biog. Cl.* 163.
KOREA, *Geo. Cl.* 61; *Child Cl.* 229; *Homes Cl.* 395; *Topics Cl.* 618; people of, *Races Cl.* 593. See also *Zones Cl.* 643-676.
KREMLIN, THE, *Geo. Cl.* 39; *Cities Cl.* 245.
KUFA-MAKING, *Geo. Cl.* 55; *Prod. & Indus. Cl.* 588.
KYOTO, JAPAN, *Geo. Cl.* 60; *Cities Cl.* 235, 238, 240, 246.
LADY OF THE LAKE, *Liter. Cl.* 474.
LAFAYETTE, MARQUIS DE, *Biog. Cl.* 187.
LAKE DEPOSITS, *Geol. Cl.* 318; lake plains, *Phys. Geo. Cl.* 548.
LAKE DISTRICT, ENGLAND, *Geo. Cl.* 34.
LAKES, *Phys. Geo. Cl.* 564; *Topics Cl.* 622.
LAND DEPOSITS, *Geol. Cl.* 319.
LANTERN AND SLIDES IN THE SCHOOL.
Methods of Use.....xxx
When to Use.....l
LAPPS, *Races Cl.* 593.
LA SALLE, ROBERT CAVELIER, *Biog. Cl.* 185.
LATIN-AMERICAN PEOPLE, *Races Cl.* 599.
LAURIER, SIR WILFRID, *Biog. Cl.* 157.
LAVA, *Agri. Cl.* 65; *Nature Cl.* 531; *Phys Geo. Cl.* 558, 559.
LEATHER, *Geo. Cl.* 4; *Nature Cl.* 522; *Prod. & Indus. Cl.* 580.
LEAVES OF PLANTS, *Bot. Cl.* 213, 214; *Nature Cl.* 523. See also *Zones Cl.* 643-676.
LEBANON, CEDARS OF, *Geo. Cl.* 54.
LEE, ROBERT E., *Biog. Cl.* 138; *Amer. Hist. Cl.* 365; home of, *Geo. Cl.* 10; *Eng. Comp. Cl.* 301; *Homes Cl.* 381.
LEMONS, *Geo. Cl.* 46; *Agri. Cl.* 68, 72; *Bot. Cl.* 218; *Eng. Comp. Cl.* 306; *Nature Cl.* 524; *Prod. & Indus. Cl.* 572.
LEONIDAS, *Biog. Cl.* 199.
LEOPOLDVILLE, BELGIAN CONGO, *Geo. Cl.* 51.
LESSON, THE.....lii
LEWIS AND CLARKE EXPLORATIONS, *Amer. Hist. Cl.* 361.
LIFE-SAVING CREW, *Geo. Cl.* 6.
LIGHTING, GOOD AND BAD, *Civ. Bett. Cl.* 257-266, 283.
LIMA (PERU), *Geo. Cl.* 30; *Cities Cl.* 234, 239, 243; *Civ. Bett. Cl.* 252, 282.
LIMESTONE, *Nature Cl.* 529.
LINCOLN, ABRAHAM, *Biog. Cl.* 139; *Liter. Cl.* 441; home of, *Geo. Cl.* 13; *Homes Cl.* 381.

LINEN, *Geo. Cl.* 35; *Home Econ. Cl.* 421; *Nature Cl.* 527; *Prod. & Indus. Cl.* 577.
LISBON, PORTUGAL, *Geo. Cl.* 44; *Cities Cl.* 234, 237, 243; *Eng. Comp. Cl.* 299.
Literature Classification, 427-484.
LIVE STOCK, *Geo. Cl.* 18; *Agri. Cl.* 73; *Prod. & Indus. Cl.* 576, 578.
LIVINGSTONE, DAVID, *Biog. Cl.* 172.
LIVIUS, TITUS, *Biog. Cl.* 193.
LIVY, *Biog. Cl.* 193.
LLAMAS, *Animals Cl.* 96; *Eng. Comp. Cl.* 308; *Nature Cl.* 520; use of, *Trans. Cl.* 631.
LOCH KATRINE, SCOTLAND, *Geo. Cl.* 35; *Eng. Comp. Cl.* 298.
LOCKS, CANAL, *Geo. Cl.* 22; *Trans. Cl.* 638; *Prod. & Indus. Cl.* 588.
LOG HOUSES, *Man. Tr. Cl.* 491.
LONDON, *Geo. Cl.* 32; *Cities Cl.* 233, 238, 243, 248; *Civ. Bett. Cl.* 262, 269, 280; *Eng. Comp. Cl.* 288, 298, 301, 303.
LONGFELLOW, HENRY W., *Biog. Cl.* 138; *Liter. Cl.* 441; home of, *Geo. Cl.* 3; *Archit. Cl.* 113; *Homes Cl.* 381.
LORELEI CLIFFS, *Geo. Cl.* 40; *Phys. Geo. Cl.* 555.
LOUIS XIV., *Biog. Cl.* 185; XVI., *Biog. Cl.* 186.
LOUISIANA, *Geo. Cl.* 12; *Child Cl.* 225. See also *Zones Cl.* 643-676.
LOWELL, JAMES R., *Biog. Cl.* 141; *Liter. Cl.* 445; home of, *Geo. Cl.* 3; *Archit. Cl.* 113; *Homes Cl.* 380.
LUCERNE, *Geo. Cl.* 44; *Cities Cl.* 236, 239, 244; *Eng. Comp. Cl.* 289, 299.
LUDLOW, *Geo. Cl.* 34; *Eng. Comp. Cl.* 294, 298.
LUMBERING, *Geo. Cl.* 3, 11, 12, 15, 16, 20, 26, 57; *Agri. Cl.* 76; *Nature Cl.* 525; *Prod. & Indus. Cl.* 585.
LUTHER, MARTIN, *Biog. Cl.* 178.
LUXOR, EGYPT, *Geo. Cl.* 50; *Eng. Comp. Cl.* 302.
LYDDA, PALESTINE, *Geo. Cl.* 53.
MACAULAY, THOS. B., *Biog. Cl.* 170.
MACHINERY, *Man. Tr. Cl.* 492; *Trans. Cl.* 632.
MADEIRA ISLANDS, *Geo. Cl.* 44; *Cities Cl.* 236, 237; *Eng. Comp. Cl.* 289; *Topics Cl.* 614.
MADERO, FRANCISCO, *Biog. Cl.* 158.
MADRAS, INDIA, *Geo. Cl.* 57; *Cities Cl.* 235, 238, 246; *Civ. Bett. Cl.* 273.
MADRID, *Geo. Cl.* 43; *Cities Cl.* 234, 239, 243; *Civ. Bett. Cl.* 264, 272, 279; *Eng. Comp. Cl.* 289.
MAGELLAN, FERDINAND, *Biog. Cl.* 127; *Amer. Hist. Cl.* 350.
MAGELLAN, STRAIT OF, *Geo. Cl.* 31; *Eng. Comp. Cl.* 294; *Gen. Hist. Cl.* 333.
MAGNUS, ALBERTUS (THE GREAT), *Biog. Cl.* 178.
MAHONEY, FRANCIS, *Liter. Cl.* 470.
MAIZE, see Corn.
MALAGA, *Geo. Cl.* 43.

MALAYAN PEOPLE, *Races Cl.* 593; *Topics Cl.* 622.
MALOJA PASS, *Geo. Cl.* 45; *Eng. Comp. Cl.* 291; *Phys. Geo. Cl.* 555.
MAMMALS, *Nature Cl.* 519.
MANCHURIA, *Geo. Cl.* 59; *Homes Cl.* 394; *Topics Cl.* 618. See also *Zones Cl.* 643-676.
MANDALAY, *Geo. Cl.* 57; *Cities Cl.* 235, 240, 246; *Eng. Comp. Cl.* 305, 311.
MANGOES, *Geo. Cl.* 26; *Agri. Cl.* 68, 72; *Home Econ. Cl.* 413; *Nature Cl.* 524; *Prod. & Indus. Cl.* 573.
MANILA, *Geo. Cl.* 23; *Child Cl.* 226; *Cities Cl.* 235, 237, 243; *Civ. Bett. Cl.* 261, 276; *Eng. Comp. Cl.* 291.
MANITOBA, *Geo. Cl.* 25; *Child Cl.* 226.
Manual Training Classification, 485-494.
MANUFACTURES, *Agri. Cl.* 77; *Home Econ. Cl.* 419; *Prod. & Indus. Cl.* 567-588. See also *Zones Cl.* 643-676.
MAP, RELIEF, OF PALESTINE, *Geo. Cl.* 53.
MARACAIBO, *Geo. Cl.* 29; *Eng. Comp. Cl.* 298.
MARATHON, *Geo. Cl.* 48; *Eng. Comp. Cl.* 291; *Gen. Hist. Cl.* 329.
MARBLE, *Geo. Cl.* 46; *Nature Cl.* 529; *Man. Tr. Cl.* 491; *Prod. & Indus. Cl.* 585.
MARC ANTONY, *Biog. Cl.* 193.
MARCO POLO, *Biog. Cl.* 195.
MARIA THERESA, *Biog. Cl.* 178.
MARIE ANTOINETTE, *Biog. Cl.* 187.
MARINE DEPOSITS, *Geol. Cl.* 319.
MARKEN, *Geo. Cl.* 41.
MARKETING PRODUCTS, *Agri. Cl.* 72; *Home Econ. Cl.* 406; *Nature Cl.* 529.
MARQUETTE, FATHER, *Biog. Cl.* 130, 185.
MARMION, *Liter. Cl.* 474.
MARSHALL, JOHN, *Biog. Cl.* 333.
MARTINIQUE, *Geo. Cl.* 28; *Homes Cl.* 383; *Topics Cl.* 610.
MARY, QUEEN OF SCOTS, *Biog. Cl.* 164.
MASAI PEOPLE, *Races Cl.* 591.
MASSACHUSETTS, *Geo. Cl.* 3; *Homes Cl.* 376. See also *Zones Cl.* 643-676.
MATTERHORN, *Geo. Cl.* 45; *Eng. Comp. Cl.* 295; *Phys. Geo. Cl.* 539, 540, 555.
MATTING INDUSTRY, *Geo. Cl.* 27; *Home Econ. Cl.* 425; *Man. Tr. Cl.* 487; *Prod. & Indus. Cl.* 588.
MAXIMILIAN, EMPEROR, *Biog. Cl.* 158.
MCKINLEY, WM., *Biog. Cl.* 151; *Homes Cl.* 380, 381.
MEADE, GEN. GEORGE GORDON, *Biog. Cl.* 141.
MEAT INDUSTRY, *Agri. Cl.* 73-76; *Home Econ. Cl.* 410; *Prod. & Indus. Cl.* 575, 576.
MEDICI, CATHERINE, *Biog. Cl.* 184.
LORENZO, *Biog. Cl.* 196.
MELANESIAN PEOPLE, *Races Cl.* 591.
MELBOURNE, *Geo. Cl.* 61; *Cities Cl.* 235, 244, 247; *Civ. Bett. Cl.* 266, 275, 277; *Eng. Comp. Cl.* 296.

MELROSE ABBEY, *Geo. Cl.* 34; *Archit. Cl.* 111, 118; *Eng. Comp. Cl.* 308; *Gen. Hist. Cl.* 336.
MEN, FAMOUS, see *Biog. Cl.* 121-210; *Liter. Cl.* 427-485.
MENDEZ, *Amer. Hist. Cl.* 348; *Gen. Hist. Cl.* 336.
MER DE GLACE, *Geo. Cl.* 45; *Eng. Comp. Cl.* 299; *Phys. Geo. Cl.* 539, 563.
MERCURY, *Myth. Cl.* 499.
MESAS, *Phys. Geo. Cl.* 551.
MESOPOTAMIA, *Geo. Cl.* 55; *Child Cl.* 228; *Gen. Hist. Cl.* 328, 329; *Homes Cl.* 392; *Races Cl.* 600; *Topics Cl.* 616. See also *Zones Cl.* 643-676.
MESSINA, *Geo. Cl.* 47; *Cities Cl.* 236, 237; *Civ. Bett. Cl.* 256, 277; *Eng. Comp. Cl.* 310; *Phys. Geo. Cl.* 559, 561.
METALS, *Man. Tr. Cl.* 492; *Prod. & Indus. Cl.* 582. See also individual names.
METAL WORK, *Man. Tr. Cl.* 489.
METHODS OF USE.
Of Lantern and Slides...xxx
Of Stereoscope and Stereographs xxxiv
When to Use.....1
MEXICAN WAR, *Amer. Hist. Cl.* 363.
MEXICO, *Geo. Cl.* 26; *Biog. Cl.* 157; *Gen. Hist. Cl.* 335; *Homes Cl.* 382; *Phys. Geo. Cl.* 552; *Races Cl.* 599; *Topics Cl.* 606. See also *Zones Cl.* 643-676.
MICHELANGELO, *Biog. Cl.* 197.
MICHIGAN, *Geo. Cl.* 14; *Homes Cl.* 379. See also *Zones Cl.* 643-676.
MIDDLE ATLANTIC STATES, *Geo. Cl.* 4; *Topics Cl.* 607. See also *Zones Cl.* 643-676.
MIDNIGHT SUN, *Geo. Cl.* 38; *Eng. Comp. Cl.* 294.
MILAN, *Geo. Cl.* 46; *Cities Cl.* 234, 240; *Civ. Bett. Cl.* 271; *Eng. Comp. Cl.* 302; *Amer. Hist. Cl.* 345.
MILITARY DRILL, *Geo. Cl.* 6.
MILK INDUSTRY, *Geo. Cl.* 6, 7, 43, 46, 50; *Agri. Cl.* 74; *Home Econ. Cl.* 408; *Nature Cl.* 522; *Prod. & Indus. Cl.* 574.
MILL, JOHN STUART, *Biog. Cl.* 170.
MILLER, JOAQUIN, *Biog. Cl.* 150; *Liter. Cl.* 445.
MILLET, *Geo. Cl.* 60; *Agri. Cl.* 69; *Bot. Cl.* 217; *Eng. Comp. Cl.* 308; *Home Econ. Cl.* 407; *Nature Cl.* 527; *Prod. & Indus. Cl.* 571.
MILLS, FLOUR, *Geo. Cl.* 53; *Home Econ. Cl.* 407.
SAW, *Geo.* Cl. 16, 20, 24; *Agri. Cl.* 76, 77; *Eng. Comp. Cl.* 307; *Man. Tr. Cl.* 490; *Prod. & Indus. Cl.* 586, 587.
MILTIADES, *Biog. Cl.* 199.
MILTON, JOHN, *Biog. Cl.* 166; *Liter. Cl.* 471.
MINERAL VEINS, *Geol. Cl.* 321.
MINERVA, *Myth. Cl.* 499.
MINES, see Coal, Copper, Diamond, Gold, Iron, Silver.
MINING, *Man. Tr. Cl.* 492; *Prod. & Indus. Cl.* 581-584.
MINNESOTA, *Geo. Cl.* 16; *Homes*

Cl. 379. See also *Zones Cl.* 643-676.
MINUTE MAN STATUE, *Geo. Cl.* 3; *Civ. Bett. Cl.* 278; *Eng. Comp. Cl.* 297.
MIRABEAU, COMTE DE, *Biog. Cl.* 186.
MISSISSIPPI RIVER, *Geo. Cl.* 12, 13; *Cities Cl.* 238, 239; *Phys. Geo. Cl.* 542; State, *Geo. Cl.* 12; *Homes Cl.* 379. See also *Zones Cl.* 643-676.
MISSOURI, *Geo. Cl.* 13; *Child Cl.* 225; *Amer. Hist. Cl.* 357, 366. See also *Zones Cl.* 643-676.
MITFORD, MARY RUSSELL, *Liter. Cl.* 471.
MOAB, *Geo. Cl.* 54; *Eng. Comp. Cl.* 295.
MOGOK, *Geo. Cl.* 57; *Eng. Comp. Cl.* 305.
MOHAMMED, *Biog. Cl.* 206.
MOHAMMEDAN ARCHITECTURE, *Archit. Cl.* 109, 110.
MOKUOWEOWEO VOLCANO, *Geo. Cl.* 23; *Geol. Cl.* 320; *Phys. Geo. Cl.* 550, 558.
MOMBASA, *Geo. Cl.* 50; *Races Cl.* 591.
MONACO, *Geo. Cl.* 42; *Cities Cl.* 236, 243, 247; *Eng. Comp. Cl.* 299; *Topics Cl.* 614.
MONGOLIAN RACE, *Races Cl.* 592.
MONOCOTYLEDONOUS PLANTS, *Bot. Cl.* 216.
MONSOON REGIONS, *Zones Cl.* 651.
MONT BLANC, *Geo. Cl.* 45; *Eng. Comp. Cl.* 289; *Phys. Geo. Cl.* 553.
MONT PELEE, *Geo. Cl.* 28; *Eng. Comp. Cl.* 310; *Phys. Geo. Cl.* 554, 558.
MONTCALM, GEN., *Biog. Cl.* 130, 157, 186.
MONTEVIDEO, *Geo. Cl.* 32; *Cities Cl.* 234, 237, 243; *Civ. Bett. Cl.* 261, 268, 274; *Eng. Comp. Cl.* 288.
MONTGOMERY, RICHARD, *Biog. Cl.* 132; *Amer. Hist. Cl.* 359.
JAMES, *Liter. Cl.* 472.
MONTREAL, *Geo. Cl.* 24; *Cities Cl.* 234, 238; *Civ. Bett. Cl.* 251; *Eng. Comp. Cl.* 298.
MONUMENTS, *Civ. Bett. Cl.* 278; *Gen. Hist. Cl.* 328, 329.
MOONSTONES, *Geo. Cl.* 57; *Eng. Comp. Cl.* 308; *Prod. & Indus. Cl.* 584.
MOORE, THOMAS, *Liter. Cl.* 472.
MOORISH ARCHITECTURE, *Archit. Cl.* 109.
MORAINES, *Nature Cl.* 532; *Phys. Geo. Cl.* 563.
MORE, SIR THOMAS, *Biog. Cl.* 163.
MORGAN, JOHN PIERPONT, *Biog. Cl.* 147.
MOSCOW, *Geo. Cl.* 39; *Cities Cl.* 233, 239, 245; *Civ. Bett. Cl.* 270; *Eng. Comp. Cl.* 289.
MOSES, *Biog. Cl.* 204.
MOSUL, *Geo. Cl.* 55.
MOTLEY, JOHN LATHROP, *Liter. Cl.* 446.
MOUNT VERNON, *Geo. Cl.* 11; *Biog. Cl.* 131; *Eng. Comp. Cl.* 301; *Liter. Cl.* 440.
MOUNTAIN CLIMBING IN WASHINGTON, *Geo. Cl.* 21; *Eng. Comp. Cl.* 288; in Norway, *Geo. Cl.* 37; in Switzer-

land, *Geo. Cl.* 45; *Eng. Comp. Cl.* 291.
MOUNTAINS, *Phys. Geo. Cl.* 550-555; *Topics Cl.* 622. See also individual names.
MOZART, *Biog. Cl.* 179.
MUIR, JOHN, *Biog. Cl.* 148; *Liter. Cl.* 446.
MULES, *Animals Cl.* 96; *Eng. Comp. Cl.* 308; *Nature Cl.* 520; use of, *Trans. Cl.* 640.
MUTTON, *Prod. & Indus. Cl.* 575.
MYKENÆ, *Geo. Cl.* 48.
Mythology Classification, 495-516.
NAGASAKI, *Geo. Cl.* 61.
NANKIN, *Geo. Cl.* 58.
NAPLES, *Geo. Cl.* 46; *Cities Cl.* 234, 237; *Civ. Bett. Cl.* 256.
NAPOLEON, *Biog. Cl.* 188.
NAPOLEONIC PERIOD, *Gen. Hist. Cl.* 334.
NARRATION, *Eng. Comp. Cl.* 287.
NARVAEZ, DE, *Amer. Hist. Cl.* 348.
Nature Study Classification, 517-534.
NAVAJO INDIANS, *Geo. Cl.* 18; *Amer. Hist. Cl.* 343; *Homes Cl.* 380; *Races Cl.* 594.
NAVIGATION, *Trans. Cl.* 635.
NEBRASKA, *Geo. Cl.* 14.
NEBUCHADNEZZAR, *Biog. Cl.* 202.
NEGRO RACE, *Races Cl.* 591.
NELSON, LORD, *Biog. Cl.* 168.
NEPTUNE, *Myth. Cl.* 501.
NETHERLANDS, *Geo. Cl.* 40. See Holland.
NEWMARKET, *Geo. Cl.* 61.
NEWTON, SIR ISAAC, *Biog. Cl.* 166.
NEW ENGLAND STATES, *Geo. Cl.* 3; *Homes Cl.* 376; *Topics Cl.* 607. See also *Zones Cl.* 643-676.
NEW HAMPSHIRE, *Geo. Cl.* 4. See also *Zones Cl.* 643-676.
NEW JERSEY, *Geo. Cl.* 7; *Child Cl.* 225; *Amer. Hist. Cl.* 359; *Homes Cl.* 377. See also *Zones Cl.* 643-676.
NEW SOUTH WALES, *Geo. Cl.* 62.
NEW YORK CITY, *Geo. Cl.* 4, 5; *Cities Cl.* 233, 236, 246, 248; *Civ. Bett. Cl.* 251, 257, 258, 259, 266, 273, 275, 276; *Eng. Comp. Cl.* 287, 297, 300, 302, 310; *Amer. Hist. Cl.* 356.
NEW YORK STATE, *Geo. Cl.* 4; *Amer. Hist. Cl.* 359; *Homes Cl.* 377. See also *Zones Cl.* 643-676.
NEW ZEALAND, *Geo. Cl.* 62; *Child Cl.* 229; *Races Cl.* 601. See also *Zones Cl.* 643-676.
NIAGARA FALLS, *Geo. Cl.* 6, 7; *Civ. Bett. Cl.* 274; *Eng. Comp. Cl.* 292, 303; *Geol. Cl.* 321; *Amer. Hist. Cl.* 358; *Phys. Geo. Cl.* 556, 557, 562.
NICE, *Geo. Cl.* 42; *Cities Cl.* 236, 237, 244, 277; *Eng. Comp. Cl.* 289.
NIJNI-NOVGOROD, *Geo. Cl.* 39.
NIKE, *Myth. Cl.* 513.
NIKKO, *Geo. Cl.* 60; *Cities Cl.* 246; *Eng. Comp. Cl.* 296, 305.
NILE RIVER, *Geo. Cl.* 50; *Cities*

Cl. 240; *Phys. Geo. Cl.* 542, 546.
NINEVEH, *Geo. Cl.* 55; *Eng. Comp. Cl.* 300; *Gen. Hist. Cl.* 329.
NIOBE, *Myth. Cl.* 508.
NOGI, GEN., *Biog. Cl.* 207.
NORMAN ARCHITECTURE, *Archit. Cl.* 113; Conquest, *Biog. Cl.* 160; *Gen. Hist. Cl.* 331.
NORMANDY, *Geo. Cl.* 42.
NORSEMEN, *Amer. Hist. Cl.* 345.
NORSE MYTHS, *Myth. Cl.* 513.
NORTH AMERICA, *Geo. Cl.* 3; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
NORTH CAROLINA, *Geo. Cl.* 11; *Amer. Hist. Cl.* 357; *Homes Cl.* 378. See also *Zones Cl.* 643-676.
NORWAY, *Geo. Cl.* 36; *Child Cl.* 227; *Homes Cl.* 385; *Races Cl.* 596; *Topics Cl.* 614. See also *Zones Cl.* 643-676.
NORTON, CAROLINE E., *Liter. Cl.* 472.
NOTABLE EVENTS, *Gen. Hist. Cl.* 329.
NOTRE DAME, *Geo. Cl.* 42; *Archit. Cl.* 118; *Eng. Comp. Cl.* 301.
NOVA SCOTIA, *Geo. Cl.* 24.
NUREMBERG, *Geo. Cl.* 40; *Cities Cl.* 239.
NUTS, *Agri. Cl.* 68; *Prod. & Indus. Cl.* 573.
OASES, *Phys. Geo. Cl.* 550; *Topics Cl.* 622.
OATS, *Geo. Cl.* 38; *Agri. Cl.* 68; *Bot. Cl.* 217; *Nature Cl.* 527; *Prod. & Indus. Cl.* 570.
OBSERVATION OUTLINE FOR *Child Cl.* 224; *Gen. Hist. Cl.* 327; *Homes Cl.* 375; *Home Econ. Cl.* 402; *Phys. Geo. Cl.* 536; *Prod. & Indus. Cl.* 568; *Races Cl.* 590; *Trans. Cl.* 626; *Zones Cl.* 644.
OCEANS, *Topics Cl.* 622. See also individual names.
OCEANIA, *Geo. Cl.* 61; *Child Cl.* 229; *Topics Cl.* 619.
O'CONNELL, DANIEL, *Biog. Cl.* 169.
ODDE, *Geo. Cl.* 37; *Eng. Comp. Cl.* 289.
ŒDIPUS, *Myth. Cl.* 511.
OGLETHORPE, *Amer. Hist. Cl.* 357.
OHIO, *Geo. Cl.* 14; *Homes Cl.* 379. See also *Zones Cl.* 643-676.
OIL WELLS, *Geo. Cl.* 7, 10, 37; *Home Econ. Cl.* 424; *Prod. & Indus. Cl.* 581.
OKLAHOMA, *Geo. Cl.* 14.
OKUMA, COUNT, *Biog. Cl.* 207.
OLYMPUS, MOUNT, *Geo. Cl.* 48; *Myth. Cl.* 497; *Phys. Geo. Cl.* 553.
ORANGE FREE STATE, *Geo. Cl.* 52.
ORANGES, *Geo. Cl.* 19; *Agri. Cl.* 68, 71, 72; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 412; *Prod. & Indus. Cl.* 572: orange tree, *Bot. Cl.* 218; *Nature Cl.* 524.
ORE, *Geo. Cl.* 14, 15, 16; *Man. Tr. Cl.* 492; *Prod. & Indus. Cl.* 582; geologic origin of, *Geol. Cl.* 321; transportation of, *Trans. Cl.* 639.
OREGON, *Geo. Cl.* 20; *Homes Cl.*

380. See also *Zones Cl.* 643-676.
OSCILLATION, *Geol. Cl.* 314.
OSTRICHES, *Animals Cl.* 97; *Eng. Comp. Cl.* 309; *Nature Cl.* 521; *Prod. & Indus. Cl.* 581.
OTIS, GEN., *Biog. Cl.* 149.
OTTAWA, *Geo. Cl.* 24; *Cities Cl.* 235, 239, 243; *Civ. Bett. Cl.* 268, 274.
OXEN, *Nature Cl.* 520; use of, *Nature Cl.* 529. See also Cattle.
OXFORD, *Geo. Cl.* 33; *Cities Cl.* 246; *Eng. Comp. Cl.* 288.
PACIFIC COAST STATES, *Geo. Cl.* 19; *Homes Cl.* 380; *Topics Cl.* 608. See also *Zones Cl.* 643-676.
PACIFIC OCEAN, *Geo. Cl.* 23, 31.
PALACES, *Archit. Cl.* 116.
PALERMO, *Geo. Cl.* 46; *Cities Cl.* 234, 237.
PALESTINE, *Geo. Cl.* 53; *Biog. Cl.* 203; *Child Cl.* 228; *Gen. Hist. Cl.* 328, 329, 330; *Races Cl.* 600; *Topics Cl.* 617. See also *Zones Cl.* 643-676.
PALISADES, *Geo. Cl.* 7; *Phys. Geo. Cl.* 538, 555.
PALM TREES, *Bot. Cl.* 217; *Nature Cl.* 524.
PAN, *Myth. Cl.* 512.
PANAMA, *Geo. Cl.* 22; *Child Cl.* 227; *Civ. Bett. Cl.* 268; *Eng. Comp. Cl.* 291, 293, 297, 301; *Homes Cl.* 381; *Phys. Geo. Cl.* 552; *Races Cl.* 599; *Topics Cl.* 606, 609.
CONSTRUCTION OF CANAL, *Geo. Cl.* 22; *Eng. Comp. Cl.* 303, 310; *Amer. Hist. Cl.* 371; *Prod. & Indus. Cl.* 588; *Topics Cl.* 606; *Trans. Cl.* 638, 639. See also *Zones Cl.* 643-676.
PAPER-MAKING, *Geo. Cl.* 15, 16; *Agri. Cl.* 78; *Eng. Comp. Cl.* 312; *Prod. & Indus. Cl.* 586.
PARA, BRAZIL, *Geo. Cl.* 29; *Cities Cl.* 237; *Civ. Bett. Cl.* 261.
PARIS, *Myth. Cl.* 509.
PARIS (FRANCE), *Geo. Cl.* 41, 42; *Cities Cl.* 233, 239, 243; *Civ. Bett. Cl.* 253, 263, 264, 269, 277, 279, 280; *Eng. Comp. Cl.* 289, 299, 301.
PARKHURST, REV. CHAS., *Biog. Cl.* 150.
PARKS, *Civ. Bett. Cl.* 273.
PARNELL, CHARLES STEWART, *Biog. Cl.* 174.
PARTHENON, *Geo. Cl.* 48; *Archit. Cl.* 107, 108; *Eng. Comp. Cl.* 302; *Myth. Cl.* 500.
PASSES, MOUNTAIN, *Phys. Geo. Cl.* 555
PATERSON (silk mills), *Geo. Cl.* 8; *Cities Cl.* 247.
PAVING, *Civ. Bett. Cl.* 257-266, 283.
PEAKS, MOUNTAIN, *Phys. Geo. Cl.* 554; *Topics Cl.* 622.
PEARY, ROBERT E., *Biog. Cl.* 153.
PEAT, *Geo. Cl.* 36; *Eng. Comp. Cl.* 307; *Nature Cl.* 528; *Phys. Geo. Cl.* 565; *Prod. & Indus. Cl.* 581; geologic origin of, *Geol. Cl.* 321.
PEGASUS, *Myth. Cl.* 510.

PEKING, *Geo. Cl.* 58, 59; *Cities Cl.* 233, 240, 243, 246, 247; *Civ. Bett. Cl.* 257, 266, 273; *Eng. Comp. Cl.* 289, 300, 302.
PELICANS, *Animals Cl.* 97; *Eng. Comp. Cl.* 309; *Nature Cl.* 521.
PENN, WILLIAM, *Biog. Cl.* 130.
PENNSYLVANIA, *Geo. Cl.* 9; *Child Cl.* 225; *Amer. Hist. Cl.* 357, 359, 366; *Homes Cl.* 377; *Races Cl.* 598. See also *Zones Cl.* 643-676.
PERICLES, *Biog. Cl.* 200.
PERRY, COMMODORE, *Biog. Cl.* 136.
PERSEUS, *Myth. Cl.* 509.
PERSIA, *Biog. Cl.* 203.
PERSIAN ARCHITECTURE, *Archit. Cl.* 107; rugs, *Geo. Cl.* 49; *Home Econ. Cl.* 426; *Man. Tr. Cl.* 488; *Prod. & Indus. Cl.* 588.
PERU, *Geo. Cl.* 30; *Child Cl.* 226; *Homes Cl.* 384; *Races Cl.* 600; *Topics Cl.* 611. See also *Zones Cl.* 643-676.
PETER THE GREAT, *Biog. Cl.* 176; *Gen. Hist. Cl.* 334.
PETERHOF, *Geo. Cl.* 39; *Civ. Bett. Cl.* 274.
PETRIFIED FOREST, *Geo. Cl.* 18; *Eng. Comp. Cl.* 310; *Geol. Cl.* 322; *Phys. Geo. Cl.* 551.
PETROLEUM, *Geo. Cl.* 9, 10, 57; *Prod. & Indus. Cl.* 581.
PHARSALA, *Geo. Cl.* 48; *Eng. Comp. Cl.* 295.
PHILADELPHIA, *Geo. Cl.* 9; *Cities Cl.* 233, 238, 245.
PHILÆ, ISLAND OF, *Geo. Cl.* 50; *Civ. Bett. Cl.* 273; *Eng. Comp. Cl.* 295.
PHILIPPINE ISLANDS, *Geo. Cl.* 23; *Child Cl.* 226; *Eng. Comp. Cl.* 288, 291, 304; *Homes Cl.* 381, 382; *Topics Cl.* 609. See also *Zones Cl.* 643-676.
PHILLIPS, WENDELL, *Biog. Cl.* 140.
PHŒBUS (APOLLO), *Myth. Cl.* 502.
PHŒNICIAN MYTHS, *Myth. Cl.* 515.
Physical Geography Classification, 535-566.
PHYSICAL PHENOMENA, *Nature Cl.* 529.
PIGMIES, *Geo. Cl.* 52; *Myth. Cl.* 512; *Races Cl.* 591.
PILATUS, MOUNT, *Geo. Cl.* 44; *Eng. Comp. Cl.* 295, 299; *Geol. Cl.* 317, 321, 322; *Phys. Geo. Cl.* 538, 557.
PILGRIMS, THE, *Amer. Hist. Cl.* 356.
PINA CLOTH, *Geo. Cl.* 24; *Home Econ. Cl.* 425; *Man. Tr. Cl.* 487; *Prod. & Indus. Cl.* 577.
PINE FAMILY, *Bot. Cl.* 215; *Nature Cl.* 524.
PINE PRODUCTS, *Man. Tr. Cl.* 491; *Prod. & Indus. Cl.* 586.
PINEAPPLES, *Geo. Cl.* 22; *Agri. Cl.* 68; *Bot. Cl.* 217; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 413; *Prod. & Indus. Cl.* 572.
PINZON, *Amer. Hist. Cl.* 347.
PIZARRO, FRANCISCO, GONZOLA, *Biog. Cl.* 158, 190, 191;

Gen. Hist. Cl. 333; *Amer. Hist. Cl.* 349.
PLAINS, *Phys. Geo. Cl.* 547-549; *Topics Cl.* 623.
PLANT AND ANIMAL RELATIONS, *Bot. Cl.* 212.
PLANT ASSOCIATIONS, *Bot. Cl.* 219; *Nature Cl.* 526; life, *Nature Cl.* 523.
PLANTING, *Agri. Cl.* 67; *Prod. & Indus. Cl.* 570, 571; street, *Civ. Bett. Cl.* 257-266, 283.
PLANTLESS AREAS, *Bot. Cl.* 212.
PLATEAUS, *Phys. Geo. Cl.* 549; *Topics Cl.* 623.
PLATO, *Biog. Cl.* 200.
PLEASURE RESORTS, *Cities Cl.* 244. See also *Zones Cl.* 643-676.
PLOWING, *Agri. Cl.* 66; *Home Econ. Cl.* 403, 404; *Nature Cl.* 529; *Prod. & Indus. Cl.* 569, 570.
POE, EDGAR ALLAN, *Bio. Cl.* 140; *Liter. Cl.* 446.
POLLUX, *Myth. Cl.* 511.
POLYNESIANS, *Races Cl.* 601.
POMPEII, *Geo. Cl.* 46; *Civ. Bett. Cl.* 271; *Eng. Comp. Cl.* 302; *Gen. Hist. Cl.* 330.
POMPEY, *Biog. Cl.* 192.
POPE, ALEXANDER, *Biog. Cl.* 167; *Liter. Cl.* 472.
POPE PIUS X., *Biog. Cl.* 198.
POPOCATEPETL, *Geo. Cl.* 26; *Eng. Comp. Cl.* 294; *Phys. Geo. Cl.* 554, 558.
PORCELAIN, *Geo. Cl.* 33, 60; *Home Econ. Cl.* 425; *Man. Tr. Cl.* 488; *Prod. & Indus. Cl.* 584.
PORK, *Geo. Cl.* 15; *Home Econ. Cl.* 410; *Prod. & Indus. Cl.* 576.
PORT ARTHUR, *Geo. Cl.* 59; *Cities Cl.* 238; *Eng. Comp Cl.* 291, 300.
PORTO RICO, *Geo. Cl.* 21, 22; *Child Cl.* 226; *Eng. Comp. Cl.* 288, 297; *Amer. Hist. Cl.* 346; *Homes Cl.* 381; *Races Cl.* 599; *Topics Cl.* 609. See also *Zones Cl.* 643-676.
PORTUGAL, *Geo. Cl.* 44; *Homes Cl.* 388; *Topics Cl.* 615. See also *Zones Cl.* 643-676.
PORTUGUESE COLONIES, see Madeira Islands.
POSEIDON, *Myth. Cl.* 501.
POSSESSIONS OF U. S., *Geo. Cl.* 21; *Child Cl.* 226; *Homes Cl.* 381; *Phys. Geo. Cl.* 552; *Topics Cl.* 609. See also individual names.
POTATOES, *Geo. Cl.* 6; *Agri. Cl.* 71; *Bot. Cl.* 218; *Nature Cl.* 527; *Prod. & Indus. Cl.* 571.
POTTERY, *Geo. Cl.* 33, 60; *Man. Tr. Cl.* 488; *Prod. & Indus. Cl.* 584.
PRAIRIES, *Phys. Geo. Cl.* 548.
PRECIOUS METALS, see Gold, Silver; STONES, see Diamonds, Moonstones, Rubies.
PREPARATION OF SOIL, *Agri. Cl.* 66.
PRESCOTT, COL. WILLIAM, *Biog. Cl.* 130.
PRESIDENT (U. S.) AND CABINET, *Geo. Cl.* 10.
PRICE, HOMER C., Classification by, 63-80.
PRIMITIVE AGRICULTURE, *Agri.*

Cl. 69, 70; *Prod. & Indus. Cl.* 569; architecture, *Archit. Cl.* 115; homes, *Homes Cl.* 398; mechanisms, *Man. Tr. Cl.* 492; plowing, *Nature Cl.* 529; processes, *Prod. & Indus. Cl.* 579; threshing, *Agri. Cl.* 70; *Nature Cl.* 529.

PROCESSES, *Eng. Comp. Cl.* 306; Factory, *Prod. & Indus. Cl.* 577, 578.

PRODUCTS, *Eng. Comp. Cl.* 306; agricultural, *Agri. Cl.* 77; animal, *Agri. Cl.* 522; forest, *Agri. Cl.* 76; vegetable, *Nature Cl.* 527; woodland, *Agri. Cl.* 77. See also *Prod. & Indus. Cl.* 567-588; *Topics Cl.* 603-619; *Zones Cl.* 643-676.

Products and Industries Classification, 567-588.

PROMONTORIES, *Phys. Geo. Cl.* 561; *Topics Cl.* 623.

PROSERPINA, *Myth. Cl.* 505.

PSYCHE, *Myth. Cl.* 513.

PTOLEMY, *Biog. Cl.* 202.

PULQUE, *Geo. Cl.* 26; *Nature Cl.* 527; *Prod. & Indus. Cl.* 574.

PYRAMIDS, *Geo. Cl.* 49; *Archit. Cl.* 107, 119; *Eng. Comp. Cl.* 289, 302, 311; *Gen. Hist. Cl.* 329; *Homes Cl.* 390; *Phys. Geo. Cl.* 538, 540, 549.

PYRENEES, *Geo. Cl.* 42; *Eng. Comp. Cl.* 295; *Phys. Geo. Cl.* 553.

QUAKERS, THE, *Amer. Hist. Cl.* 356.

QUARRIES, *Geo. Cl.* 4, 46; *Phys. Geo. Cl.* 565; *Prod. & Indus. Cl.* 585.

QUEBEC, *Geo. Cl.* 24; *Cities Cl.* 235, 238; *Civ. Bett. Cl.* 268, 276; *Eng. Comp. Cl.* 298; *Gen. Hist. Cl.* 337; *Amer. Hist. Cl.* 358.

QUEENSTOWN, *Geo. Cl.* 35; *Cities Cl.* 236, 237; *Eng. Comp. Cl.* 298.

QUITO, *Geo. Cl.* 30; *Cities Cl.* 236, 240, 243.

QUO VADIS, *Liter. Cl.* 483.

Races of Mankind Classification, 589-602.

RAFTS, *Trans. Cl.* 635.

RAILWAYS, *Trans. Cl.* 633.

RAIN, *Nature Cl.* 531; *Phys. Geo. Cl.* 538.

RALEIGH, SIR WALTER, *Biog. Cl.* 127, 164; *Amer. Hist. Cl.* 364.

RAMESES II., *Biog. Cl.* 202.

RAMONA, *Liter. Cl.* 440.

RANGOON, *Geo. Cl.* 57; *Cities Cl.* 235, 238.

RAPHAEL, *Biog. Cl.* 197.

RAPIDS, *Nature Cl.* 530; *Phys. Geo. Cl.* 543; *Topics Cl.* 623.

RASPBERRIES, *Geo. Cl.* 21; *Agri. Cl.* 68; *Eng. Comp. Cl.* 307; *Prod. & Indus. Cl.* 572.

REINDEER, *Animals Cl.* 97; *Eng. Comp. Cl.* 308; *Nature Cl.* 520; use of, *Trans. Cl.* 632.

RELIGIOUS CENTRES, *Cities Cl.* 245.

REMBRANDT, *Biog. Cl.* 181.

REMUS, *Myth. Cl.* 512.

RENAISSANCE ARCHITECTURE, *Archit. Cl.* 112.

REPTILES, *Nature Cl.* 522.

RESIN, *Geo. Cl.* 11; *Prod. & Indus. Cl.* 586.
REVERE, PAUL, *Biog. Cl.* 131.
REVOLUTION, AMERICAN, *Amer. Hist. Cl.* 358; French, *Gen. Hist. Cl.* 332.
RHEIMS, *Geo. Cl.* 42; *Cities Cl.* 239; *Eng. Comp. Cl.* 301; *Gen. Hist. Cl.* 332; *Amer. Hist. Cl.* 344.
RHINE RIVER, *Geo. Cl.* 40, 44; *Cities Cl.* 239; *Phys. Geo. Cl.* 542; in Switzerland, *Geo. Cl.* 44; *Phys. Geo. Cl.* 543.
RHODES, CECIL J., *Biog. Cl.* 174.
RHODESIA, *Geo. Cl.* 51.
RIBAUT, JEAN, *Biog. Cl.* 127, 184; *Amer. Hist. Cl.* 352.
RICE, *Geo. Cl.* 13, 22, 23, 55, 57, 60; *Agri. Cl.* 66, 67, 69, 70; *Bot. Cl.* 217; *Eng. Comp. Cl.* 307, 308; *Home Econ. Cl.* 407, 408; *Nature Cl.* 527; *Prod. & Indus. Cl.* 570.
RICHARD I., III., *Biog. Cl.* 161.
RICHELIEU, *Biog. Cl.* 185.
RICKSHAWS, *Trans. Cl.* 628.
RIIS, JACOB, *Biog. Cl.* 152; *Liter. Cl.* 447.
RILEY, JAMES WHITCOMB, *Liter. Cl.* 447.
RIO JANEIRO, *Geo. Cl.* 29; *Cities Cl.* 234, 237, 243; *Civ. Bett. Cl.* 261, 276.
RIVER, *Nature Cl.* 530; *Phys. Geo. Cl.* 541-544; action of, *Nature Cl.* 531; deposits, *Geol. Cl.* 318; erosion, *Phys. Geo. Cl.* 537.
RIVIERA, French, *Geo. Cl.* 42; Italian, *Geo. Cl.* 46.
ROADS, *Topics Cl.* 617; cog roads, *Trans. Cl*, 633; road-making, *Eng. Comp. Cl.* 307; *Prod. & Indus. Cl.* 588.
ROBERTS, LORD, *Biog. Cl.* 173.
ROBESPIERRE, *Biog. Cl.* 187.
ROCKEFELLER, JOHN D., *Biog. Cl.* 149.
ROCKS, *Geol. Cl.* 319-323; *Nature Cl.* 529; *Phys. Geo. Cl.* 556; erosion of, *Agri. Cl.* 64.
ROCKY MOUNTAINS, U. S., *Geo. Cl.* 17; Canadian, *Geo. Cl.* 25.
ROCKY MOUNTAIN STATES, *Geo. Cl.* 16; *Topics Cl.* 608. See also *Zones Cl.* 643-676.
ROMAN ARCHITECTURE, *Archit. Cl.* 108.
ROMANESQUE ARCHITECTURE *Archit. Cl.* 111.
ROME, *Geo. Cl.* 45, 46; *Cities Cl.* 234, 240, 243, 245; *Civ. Bett. Cl.* 255, 272, 277, 281; *Eng. Comp. Cl.* 289; *Gen. Hist. Cl.* 328, 329.
ROMULUS AND REMUS, *Myth. Cl.* 512.
ROOSEVELT, THEODORE, *Biog. Cl.* 154; *Homes Cl.* 331; *Liter. Cl.* 448.
ROOTS OF PLANTS, *Bot. Cl.* 214; *Nature Cl.* 523. See also *Zones Cl.* 643-676.
ROPE-MAKING, *Geo. Cl.* 23, 27; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 425; *Man. Tr. Cl.* 486; *Nature Cl.* 527; *Prod. & Indus. Cl.* 588.
ROSETTA STONE, *Myth. Cl.* 515.
ROUSSEAU, JEAN, *Biog. Cl.* 186.
RUBENS, *Biog. Cl.* 181.
RUBBER, *Geo. Cl.* 29; *Bot. Cl.*

218; *Nature Cl*, 525, 527; *Prod. & Indus. Cl.* 577.
RUBY INDUSTRY, *Geo. Cl.* 57; *Prod. & Indus. Cl.* 584; geologic origin of, *Geol. Cl.* 321.
RUG-MAKING, *Geo. Cl.* 49; *Eng. Comp. Cl.* 307; *Man. Tr. Cl.* 488; *Prod. & Indus. Cl.* 588.
RUSHES, *Bot. Cl.* 217; *Nature Cl.* 523.
RUSKIN, *Biog. Cl.* 172; *Liter. Cl.* 473.
RUSSIA, *Geo. Cl.* 39; *Child Cl.* 227; *Gen. Hist. Cl.* 330; *Homes Cl.* 386; *Races Cl.* 598; *Topics Cl.* 615. See also *Zones Cl.* 643-676.
RUSSIAN ARCHITECTURE, *Archit. Cl.* 109.
RUSSO-JAPANESE WAR, *Geo. Cl.* 59; *Gen. Hist. Cl.* 335.
ST. BERNARD DOGS AT HOSPICE, *Geo. Cl.* 45.
ST. GAUDENS, AUGUSTUS, *Biog. Cl.* 152.
ST. LAWRENCE RIVER, *Geo. Cl.* 24; *Cities Cl.* 238.
ST. LOUIS, MO., *Geo. Cl.* 13; *Cities Cl.* 234, 239; *Civ. Bett. Cl.* 260, 280.
ST. PETERSBURG, RUSSIA, *Geo. Cl.* 39; *Cities Cl.* 233, 238, 243, 245, 248; *Civ. Bett. Cl.* 263; *Eng. Comp. Cl.* 301.
ST. PATRICK, *Biog. Cl.* 160.
ST. PIERRE, MARTINIQUE, *Geo. Cl.* 28; *Cities Cl.* 236, 237.
ST. URSULA, LEGEND OF, *Myth. Cl.* 514.
SAC INDIANS, *Geo. Cl.* 14; *Amer. Hist. Cl.* 343; *Homes Cl.* 380; *Races Cl.* 594.
SALMON, *Geo. Cl.* 20; *Animals Cl.* 90; *Eng. Comp. Cl.* 309; *Home Econ. Cl.* 412; *Nature Cl.* 522; *Prod. & Indus. Cl.* 575.
SALSBURG, *Geo. Cl.* 47; *Cities Cl.* 236, 240; *Civ. Bett. Cl.* 255, 277; *Eng. Comp. Cl.* 295.
SALT, *Geo. Cl.* 39, 42, 43; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 415; *Nature Cl.* 529; *Phys. Geo. Cl.* 565; *Prod. & Indus. Cl.* 576.
SALT LAKE CITY, *Geo. Cl.* 18; *Cities Cl.* 235, 240, 245; *Civ. Bett. Cl.* 251.
SAMOA, *Geo. Cl.* 23; *Child Cl.* 226; *Eng. Comp. Cl.* 304; *Races Cl.* 601; *Topics Cl.* 610. See also *Zones Cl.* 643-676.
SAMPSON, ADMIRAL, *Biog. Cl.* 150.
SAND DUNES, *Geo. Cl.* 3; *Agri. Cl.* 65; *Phys. Geo. Cl.* 540; *Topics Cl.* 620; Sand Dune Society, *Bot. Cl.* 219.
SAN FRANCISCO, *Geo. Cl.* 19; *Cities Cl.* 234, 236, 242.
SAN JUAN, PORTO RICO, *Geo, Cl.* 21; *Cities Cl.* 235, 237, 243; *Civ. Bett. Cl.* 252.
SAN PAULO, *Geo. Cl.* 29; *Cities Cl.* 240; *Civ. Bett. Cl.* 269.
SANTA MARTA, *Geo. Cl.* 29; *Cities Cl.* 236, 237; *Eng. Comp. Cl.* 288.
SANTIAGO, *Geo. Cl.* 27; *Eng. Comp. Cl.* 291; *Amer. Hist. Cl.* 369.
SAUL, *Biog. Cl.* 205.

SAVONAROLA, *Biog. Cl.* 196.
SAXE, JOHN G., *Liter. Cl.* 449.
SAW-MILL, *Geo. Cl.* 16, 20, 24; *Agri. Cl.* 76, 77; *Eng. Comp. Cl.* 307; *Man. Tr. Cl.* 490; *Myth. Cl.* 513; *Prod. & Indus. Cl.* 586, 587.
SCANDINAVIA, *Geo. Cl.* 36-38; *Biog. Cl.* 174; *Child Cl.* 227; *Races Cl.* 596.
SCENERY, *Eng. Comp. Cl.* 292. See also *Topics Cl.* 603-619; *Zones Cl.* 643-676.
SCHELDE RIVER, *Geo. Cl.* 41; *Cities Cl.* 238.
SCHILLER, *Biog. Cl.* 177.
SCHLEY, ADMIRAL, *Biog. Cl.* 150.
SCHURZ, CARL, *Biog. Cl.* 143.
SCOTLAND, *Geo. Cl.* 34; *Child Cl.* 227; *Homes Cl.* 385; *Races Cl.* 597; *Topics Cl.* 613. See also *Zones Cl.* 643-676.
SCOTT, WALTER, *Biog. Cl.* 169; *Liter. Cl.* 473.
GEN. WINFIELD, *Biog. Cl.* 136.
SCYLLA, *Geo. Cl.* 47; *Myth. Cl.* 509.
SEA, *Geol. Cl.* 317; sea bottoms uplifted, *Agri. Cl.* 65; sea coasts, *Phys. Geo. Cl.* 559; *Topics Cl.* 620; sea erosion, *Phys. Geo. Cl.* 537; seashore, *Phys. Geo. Cl.* 559; *Topics Cl.* 623.
SEA FOODS, *Prod. & Indus. Cl.* 575. See also Fish.
SEA GULLS, *Animals Cl.* 93; *Eng. Comp. Cl.* 309; *Nature Cl.* 521.
SEA LIONS, see Seals.
SEALS, *Animals Cl.* 98; *Eng. Comp. Cl.* 308; *Nature Cl.* 520; *Prod. & Indus. Cl.* 580.
SEAS, see individual names.
SEDAN, *Geo. Cl.* 42; *Eng. Comp. Cl.* 299.
SEDGES, *Nature Cl.* 523.
SEDIMENTARY ROCKS, *Geol. Cl.* 320.
SEEDS, *Nature Cl.* 523. See also *Zones Cl.* 643-676.
SEGOVIA, *Geo. Cl.* 43.
SEINE RIVER, *Geo. Cl.* 41, 42; *Cities Cl.* 239.
SEMITIC PEOPLE, *Races Cl.* 600.
SEOUL, *Geo. Cl.* 61; *Cities Cl.* 235, 238; *Eng. Comp. Cl.* 300.
SEVILLE, *Geo. Cl.* 43; *Cities Cl.* 234, 239; *Civ. Bett. Cl.* 277; *Eng. Comp. Cl.* 291; *Gen. Hist. Cl.* 333.
SEWARD, WILLIAM H., *Biog. Cl.* 137.
SHADUFS, *Geo. Cl.* 50; *Prod. & Indus. Cl.* 587.
SHAFTER, GENERAL, *Biog. Cl.* 145.
SHAKESPEARE, WILLIAM, *Biog. Cl.* 165; *Liter. Cl.* 477.
SHALE (rock), *Nature Cl.* 529.
SHANGHAI, CHINA, *Geo. Cl.* 58; *Cities Cl.* 233, 238; *Civ. Bett. Cl.* 257; *Eng. Comp. Cl.* 289.
SHARON, PLAIN OF (Palestine), *Geo. Cl.* 53.
SHAWL WEAVING, *Geo. Cl.* 55; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 426; *Man. Tr. Cl.* 487; *Prod. & Indus. Cl.* 579.
SHEEP, *Agri. Cl.* 75; *Animals*

Cl. 98; *Eng. Comp. Cl.* 308, 309; *Nature Cl.* 520; *Prod. & Indus. Cl.* 578.
SHERMAN, GEN. WM. T., *Biog. Cl.* 142.
SHIP BUILDING, *Geo. Cl.* 36; *Eng. Comp Cl.* 303; *Man. Tr. Cl.* 490; *Prod. & Indus. Cl.* 588.
SHOE MANUFACTURE, *Geo. Cl.* 4, 40; *Eng. Comp. Cl.* 306; *Home Econ. Cl.* 424, 425, 426; *Prod. & Indus. Cl.* 580.
SHOTTERY, ENGLAND, *Geo. Cl.* 34; *Liter. Cl.* 477.
SHREWSBURY, *Geo. Cl.* 34; *Eng. Comp. Cl.* 288; *Gen. Hist. Cl.* 337.
SICILY, *Geo. Cl.* 46; *Child Cl.* 228; *Eng. Comp. Cl.* 289, 299; *Gen. Hist. Cl.* 328. See also *Zones Cl.* 643-676.
SIENKIEWICZ, HENRYCK, *Liter. Cl.* 483.
SIERRAS (U. S.), *Geo. Cl.* 20; *Phys. Geo. Cl.* 551; (Spain), *Geo. Cl.* 43.
SILK INDUSTRY, *Geo. Cl.* 8, 54; *Agri. Cl.* 77, 78; *Home Econ. Cl.* 421, 422; *Nature Cl.* 522; *Prod. & Indus. Cl.* 579.
SILK WORMS, *Animals Cl.* 99; *Nature Cl.* 522.
SILLS, *Phys. Geo. Cl.* 559.
SILVER, *Geo. Cl.* 31; *Prod. & Indus. Cl.* 583.
SINAI PENINSULA, *Geo. Cl.* 53; *Gen. Hist. Cl.* 328; *Topics Cl.* 617. See also *Zones Cl.* 643-676.
SIOUX INDIANS, *Geo. Cl.* 14; *Amer. Hist. Cl.* 343; *Homes Cl.* 380; *Races Cl.* 594.
SKYSCRAPERS, *Archit. Cl.* 114.
SLAVONIC PEOPLE, *Races Cl.* 598.
SMELTING, *Geo. Cl.* 15; *Man. Tr. Cl.* 492.
SMYRNA, *Geo. Cl.* 53; *Cities Cl.* 235, 237, 243; *Civ. Bett. Cl.* 257.
SNAKES, *Animals Cl.* 99; *Eng. Comp. Cl.* 309; *Nature Cl.* 522.
SNOW AND ICE, *Geol. Cl.* 316.
SOCRATES, *Biog. Cl.* 200; *Liter. Cl.* 484.
SOIL, CULTIVATION OF, *Nature Cl.* 529; drainage, *Agri. Cl.* 65; fertilization of, *Nature Cl.* 529; formation, *Agri. Cl.* 64; *Nature Cl.* 528; irrigation, *Agri. Cl.* 66; *Nature Cl.* 529; *Prod. & Indus. Cl.* 587; *Topics Cl.* 621; kinds of, *Nature Cl.* 528; preparation of, *Agri. Cl.* 66.
SOLOMON, *Biog. Cl.* 205.
SOUTH AFRICA, *Geo. Cl.* 52; *Homes Cl.* 391; *Races Cl.* 595; *Topics Cl.* 605. See also *Zones Cl.* 643-676.
SOUTH AMERICA, *Geo. Cl.* 28; *Biog. Cl.* 158; *Child Cl.* 226; *Homes Cl.* 383; *Races Cl.* 599; *Topics Cl.* 610. See also *Zones Cl.* 643-676.
SOUTH ATLANTIC STATES, *Geo. Cl.* 10; *Topics Cl.* 607. See also *Zones Cl.* 643-676.
SOUTH CAROLINA, *Geo. Cl.* 11; *Amer. Hist. Cl.* 357, 359; *Homes Cl.* 378. See also *Zones Cl.* 643-676.

SPAIN, *Geo. Cl.* 42; *Child Cl.* 227; *Homes Cl.* 388; *Gen. Hist. Cl.* 328, 330; *Races Cl.* 597; *Topics Cl.* 615. See also *Zones Cl.* 643-676.
SPANISH-AMERICAN ARCHITECTURE, *Archit. Cl.* 113; War, *Amer. Hist. Cl.* 367.
SPARTA, *Geo. Cl.* 48; *Eng. Comp. Cl.* 291.
SPARTACUS, *Liter. Cl.* 469.
SPENSER, EDMUND, *Liter. Cl.* 479.
SPHINX, *Geo. Cl.* 49; *Archit. Cl.* 107; *Myth. Cl.* 515; *Phys. Geo. Cl.* 540.
SPINNING, *Geo. Cl.* 4; *Home Econ. Cl.* 419; *Man. Tr.* 487; *Prod. & Indus. Cl.* 577, 578.
SPITZBERGEN, *Geo. Cl.* 38; *Eng. Comp. Cl.* 294.
SPORE-BEARING PLANTS, *Bot. Cl.* 215; *Nature Cl.* 526.
SPRINGS, HOT, *Phys. Geo. Cl.* 557; *Topics Cl.* 621.
STAMBOUL, *Geo. Cl.* 48.
STANDISH, MILES, *Biog. Cl.* 129.
STANLEY, HENRY M., *Liter. Cl.* 449.
STANLEY POOL, *Geo. Cl.* 51; *Phys. Geo. Cl.* 565.
STARR, FREDERICK, Classification by, 589-602.
STEAMSHIPS, *Trans. Cl.* 636, 637.
STEDMAN, EDMUND C., *Biog. Cl.* 145; *Liter. Cl.* 450.
STEEL, *Geo. Cl.* 9; *Man. Tr. Cl.* 493; *Prod. & Indus. Cl.* 582.
STEERS, *Animals Cl.* 87; *Eng. Comp. Cl.* 308.
STEMS, *Bot. Cl.* 212, 214.
STEREOGRAPH.
What is it? xiii
Filing and numbering.. xxvii
Methods of use..... xxx
When to use..... 1
Effects produced..... xv
Psychology of..... xvii
As an aid in teaching *English Composition*, 285-287; *Architecture*, 103-106; *Child Life*, 221-225; *History*, 325, 327, 341, 342; *Homes and Life of the People*, 373-375; *Nature Study*, 517, 518; *Physical Geography*, 535, 536.
STEREOSCOPE, USE OF, BY TEACHER, xxxiv, 2.
STEREOSCOPE AND STEREOGRAPH IN THE SCHOOL.
Effects produced..... xv
Psychology of..... xvii
Methods of use..... xxx
When to use..... 1
Binocular vision..... xix
STEVENSON, ROBERT L., *Liter. Cl.* 479.
STIRLING CASTLE, *Geo. Cl.* 35; *Archit. Cl.* 113; *Eng. Comp. Cl.* 298; *Gen. Hist. Cl.* 332.
STOCKHOLM, *Geo. Cl.* 38; *Cities Cl.* 234, 237, 243; *Civ. Bett. Cl.* 263, 269, 276, 281; *Eng. Comp. Cl.* 289, 301.
STOCKYARDS, *Geo. Cl.* 15; *Home Econ. Cl.* 411.
STONE, QUARRYING, *Geo. Cl.* 4, 46; *Man. Tr. Cl.* 491; *Prod. & Indus. Cl.* 585; stone structures, *Man. Tr. Cl.* 491.

STORM AND SUNSHINE, *Phys. Geo. Cl.* 565.
STOWE, HARRIET BEECHER, *Liter. Cl.* 451.
STRAITS, *Phys. Geo. Cl.* 561; *Topics Cl.* 623.
STRATFORD-ON-AVON, ENGLAND, *Geo. Cl.* 34; *Eng. Comp. Cl.* 298.
STRATIFIED ROCK, *Geol. Cl.* 322; *Nature Cl.* 529.
STRAUS, OSCAR, *Biog. Cl.* 153.
STRAWBERRIES, *Geo. Cl.* 20; *Agri. Cl.* 68; *Eng. Comp. Cl.* 306; *Prod. & Indus. Cl.* 572.
STREETS, TYPICAL, *Civ. Bett. Cl.* 257; lighting, paving, planting, traffic, wiring, *Civ. Bett. Cl.* 283, 284.
STUYVESANT, PETER, *Biog. Cl.* 129.
SUEZ CANAL, *Geo. Cl.* 49; *Gen. Hist. Cl.* 338.
SUGAR, BEET, *Geo. Cl.* 7, 8, 15, 40; *Agri. Cl.* 67, 68; *Home Econ. Cl.* 414; *Prod. & Indus. Cl.* 571.
CANE, *Geo. Cl.* 12, 28, 30; *Agri. Cl.* 66, 67, 68, 71; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 415; *Nature Cl.* 527; *Prod. & Indus. Cl.* 571.
SUMNER, CHARLES, *Biog. Cl.* 140.
SUN, MIDNIGHT, *Geo. Cl.* 38; *Eng. Comp. Cl.* 294.
SWAMP DEPOSITS, *Geol. Cl.* 318.
SWEDEN, *Geo. Cl.* 38; *Child Cl.* 227; *Homes Cl.* 386; *Races Cl.* 596; *Topics Cl.* 615. See also *Zones Cl.* 643-676.
SWICKERATH, REV. ROBERT, Classification by, 121-210.
SWIFT, JONATHAN, *Biog. Cl.* 167.
SWINE, *Animals Cl.* 101; *Nature Cl.* 520.
SWISS ARCHITECTURE, *Archit. Cl.* 115.
SWITZERLAND, *Geo. Cl.* 44; *Child Cl.* 227; *Homes Cl.* 388; *Races Cl.* 596; *Topics Cl.* 616. See also *Zones Cl.* 643-676.
SYDNEY, *Geo. Cl.* 62; *Cities Cl.* 235, 238, 242, 244; *Civ. Bett. Cl.* 269; *Eng. Comp. Cl.* 302.
SYRACUSE (SICILY), *Geo. Cl.* 46; *Cities Cl.* 236, 237; *Gen. Hist. Cl.* 329.
SYRIA, *Geo. Cl.* 54; *Child Cl.* 228; *Gen. Hist. Cl.* 328, 329; *Homes Cl.* 392; *Races Cl.* 600; *Topics Cl.* 617. See also *Zones Cl.* 643-676.
TABLE MOUNTAIN, *Geo. Cl.* 52; *Phys. Geo. Cl.* 551.
TACOMA, MOUNT, *Geo. Cl.* 21; *Eng. Comp. Cl.* 293; *Geol. Cl.* 323; *Phys. Geo. Cl.* 554, 557.
TAFT, WILLIAM H., *Biog. Cl.* 153.
TAGUS RIVER, *Geo. Cl.* 44.
TAJ MAHAL, *Geo. Cl.* 56; *Eng. Comp. Cl.* 302; *Gen. Hist. Cl.* 332.
TALL STRUCTURES, *Archit. Cl.* 119.
TALUS ACCUMULATIONS, *Phys. Geo. Cl.* 540.
TANTALLON CASTLE, *Geo. Cl.*

34; *Eng. Comp. Cl.* 291.
TAPESTRY WEAVING, *Geo. Cl.* 42; *Eng. Comp. Cl.* 307; *Home Econ. Cl.* 426; *Man. Tr. Cl.* 488; *Prod. & Indus. Cl.* 579.
TAR, *Geo. Cl.* 11; *Man. Tr. Cl.* 491; *Prod. & Indus. Cl.* 586.
TASMANIA, *Geo. Cl.* 62; *Child Cl.* 229. See also *Zones Cl.* 643-676.
TAYLOR, BAYARD, *Biog. Cl.* 143; *Liter. Cl.* 451.
TAYLOR, JAMES KNOX, Classification by, 103-120.
TEA, *Geo. Cl.* 58, 60; *Agri. Cl.* 71; *Bot. Cl.* 218; *Eng. Comp. Cl.* 308; *Home Econ. Cl.* 413; *Nature Cl.* 527; *Prod. & Indus. Cl.* 573.
TEACHER'S PREPARATION, xlviii, 2.
TELL, WILLIAM, *Biog. Cl.* 182; *Liter. Cl.* 470.
TENEMENTS, *Civ. Bett. Cl.* 282.
TENNESSEE, *Geo. Cl.* 13.
TENNYSON, ALFRED, *Liter. Cl.* 479.
TEUTONIC PEOPLE, *Races Cl.* 595.
TEXAS, *Geo. Cl.* 13; *Homes Cl.* 379. See also *Zones Cl.* 643-676.
THACKERAY, WILLIAM, *Biog. Cl.* 170; *Liter. Cl.* 480.
THAMES RIVER, *Geo. Cl.* 32; *Cities Cl.* 238; *Phys. Geo. Cl.* 541.
THATCHED HOUSES, *Man. Tr. Cl.* 489.
THEMISTOCLES, *Biog. Cl.* 200.
THERMOPYLÆ, *Geo. Cl.* 48; *Gen. Hist. Cl.* 329.
THESEUS, *Myth. Cl.* 510.
THOUSAND ISLANDS, THE, *Geo. Cl.* 24.
THRESHING, *Geo. Cl.* 25, 42; *Agri. Cl.* 70; *Home Econ. Cl.* 407; *Nature Cl.* 529; *Prod. & Indus. Cl.* 569.
THRUSH, SONG, *Animals Cl.* 100; *Eng. Comp. Cl.* 309; *Nature Cl.* 521.
THURSO, *Geo. Cl.* 35.
TIBERIAS, PALESTINE, *Geo. Cl.* 54.
TIBERIUS, *Biog. Cl.* 193.
TIENTSIN, *Geo. Cl.* 58; *Cities Cl.* 233, 240.
TIGERS, *Animals Cl.* 101; *Eng. Comp. Cl.* 309; *Nature Cl.* 520.
TIGRIS RIVER, *Geo. Cl.* 55; *Phys. Geo. Cl.* 542.
TITIAN, *Biog. Cl.* 197.
TITICACA, LAKE, *Geo. Cl.* 31; *Phys. Geo. Cl.* 565.
TOBACCO, *Geo. Cl.* 28; *Agri. Cl.* 71; *Bot. Cl.* 218; *Nature Cl.* 527; *Prod. & Indus. Cl.* 588.
TOKYO, *Geo. Cl.* 60; *Cities Cl.* 238, 244, 247; *Civ. Bett. Cl.* 257; *Eng. Comp. Cl.* 302, 305.
TOLSTOI, LEO, *Biog. Cl.* 177.
Topics for the Grades Classification, 603-624.
TORNADO, HAVOC OF, *Geo. Cl.* 13; *Eng. Comp. Cl.* 310.
TRADE WIND ZONE, *Zones Cl.* 648.
TRAJAN, EMPEROR, *Biog. Cl.* 194.

Transportation Classification, 625-642.
TRANSPORTATION, METHODS OF, *Home Econ. Cl.* 404. See also *Topics Cl.* 603-619; *Zones Cl.* 643-676.
TRAP ROCK, *Geol. Cl.* 320.
TREES, *Nature Cl.* 524, 525; BIG, *Geo. Cl.* 20; *Eng. Comp. Cl.* 306.
TROJAN WAR, *Myth. Cl.* 511.
TROSSACHS, *Geo. Cl.* 35; *Eng. Comp. Cl.* 298; *Phys. Geo. Cl.* 553.
TROWBRIDGE, JOHN TOWNSEND, *Liter. Cl.* 452.
TUNNELS, *Geo. Cl.* 8; *Trans. Cl.* 639.
TURKEY, in Asia, *Geo. Cl.* 53; *Homes Cl.* 392; *Topics Cl.* 616; in Europe, *Geo. Cl.* 48; *Gen. Hist. Cl.* 328, 330; *Homes Cl.* 390; *Races Cl.* 593; *Topics Cl.* 616. See also *Zones Cl.* 643-676.
TURKISH ARCHITECTURE, *Archit. Cl.* 109; colonies, see Egypt; people, *Races Cl.* 593.
TURPENTINE, *Geo. Cl.* 11; *Man. Tr. Cl.* 491; *Nature Cl.* 525, 527; *Prod. & Indus. Cl.* 586.
TUTUILA, *Geo. Cl.* 23.
TYNDALL, JOHN, *Biog. Cl.* 173.
TYROL, AUSTRIAN, *Geo. Cl.* 47; *Eng. Comp. Cl.* 295; *Homes Cl.* 389.
UGANDA, *Geo. Cl.* 51.
ULWAR, *Geo. Cl.* 56; *Eng. Comp. Cl.* 300.
ULYSSES, *Myth. Cl.* 509.
UNDERGROUND STREAMS, *Nature Cl.* 530.
UNITED STATES, *Geo. Cl.* 3; *Child Cl.* 235; *Phys. Geo. Cl.* 551; *Races Cl.* 594, 598; *Topics Cl.* 607. See also *Zones Cl.* 643-676.
UNTER DEN LINDEN, *Geo. Cl.* 39; *Civ. Bett. Cl.* 263.
UPLIFTED SEA BOTTOMS, *Agri. Cl.* 65.
URUGUAY, *Geo. Cl.* 32; *Homes Cl.* 384; *Topics Cl.* 611. See also *Zones Cl.* 643-676.
USE, METHODS OF.....xxx
WHEN TO.....1
UTAH, *Geo. Cl.* 18. See also *Zones Cl.* 643-676.
VALE OF CASHMERE, *Geo. Cl.* 55; *Eng. Comp. Cl.* 295; *Phys. Geo. Cl.* 565.
VALENCIA, *Geo. Cl.* 43; *Cities Cl.* 234, 237; *Civ. Bett. Cl.* 264; *Eng. Comp. Cl.* 299.
VALLEYS, *Nature Cl.* 530; *Phys. Geo. Cl.* 544-547.
VANCOUVER, *Geo. Cl.* 25; *Cities Cl.* 238; *Eng. Comp. Cl.* 298.
VAN DYKE, HENRY, *Liter. Cl.* 452.
VATICAN, *Geo. Cl.* 46; *Civ. Bett. Cl.* 272.
VEGETATION, *Geol. Cl.* 317. See also *Topics Cl.* 603-619; *Zones Cl.* 643-676.
VELDTS, *Geo. Cl.* 52; *Eng. Comp. Cl.* 295.
VENEZUELA, *Geo. Cl.* 28; *Child Cl.* 226; *Amer. Hist. Cl.* 347; *Topics Cl.* 611. See also *Zones Cl.* 643-676.
VENICE, *Geo. Cl.* 46; *Cities Cl.* 234, 237, 241; *Civ. Bett. Cl.* 256, 271, 277, 281;

Eng. Comp. Cl. 289; *Gen. Hist. Cl.* 332.
VENUS, *Myth. Cl.* 507.
VERGIL, *Liter. Cl.* 484.
VERRAZANO, *Amer. Hist. Cl.* 351.
VERSAILLES, *Geo. Cl.* 42; *Eng. Comp. Cl.* 301.
VESPASIAN, EMPEROR, *Biog. Cl.* 194.
VESPUCCI, *Biog. Cl.* 127; *Amer. Hist. Cl.* 347.
VESTA, *Myth. Cl.* 512.
VESUVIUS, *Geo. Cl.* 46; *Eng. Comp. Cl.* 299; *Phys. Geo. Cl.* 554.
VICTOR EMMANUEL II., *Biog. Cl.* 198.
VICTORIA, QUEEN, *Biog. Cl.* 172.
VICTORIA FALLS, *Geo. Cl.* 51; *Eng. Comp. Cl.* 299; *Phys. Geo. Cl.* 544.
VICTORIA NYANZA, *Geo. Cl.* 51; *Phys. Geo. Cl.* 544, 565.
VIENNA, *Geo. Cl.* 47; *Cities Cl.* 233, 240, 243, 248; *Civ. Bett. Cl.* 254, 264, 271, 275; *Eng. Comp. Cl.* 289.
VIKING SHIP, *Geo. Cl.* 36; *Eng. Comp. Cl.* 298; *Amer. Hist. Cl.* 346.
VINCI, DA, *Biog. Cl.* 196.
VINES, *Nature Cl.* 523; vine family, *Bot. Cl.* 218.
VINEYARDS, *Geo. Cl.* 42; *Agri. Cl.* 68; *Home Econ. Cl.* 413; *Prod. & Indus. Cl.* 592.
VIRGINIA, *Geo. Cl.* 10; *Child Cl.* 225; *Homes Cl.* 378. See also *Zones Cl.* 643-676.
VISUAL INSTRUCTION.....ix
VOLCANIC ASH, *Geol. Cl.* 323; *Nature Cl.* 528; *Phys. Geo. Cl.* 559; cones, *Phys. Geo. Cl.* 557; crater, *Phys. Geo. Cl.* 558; eruption, *Phys. Geo. Cl.* 558; fissures, *Phys. Geo. Cl.* 558; formation, *Phys. Geo. Cl.* 551; lava, *Phys. Geo. Cl.* 558.
VOLCANOES, *Nature Cl.* 531; *Phys. Geo. Cl.* 557, 558, 559; *Topics Cl.* 623.
VOLTAIRE, *Biog. Cl.* 186.
VULCANISM, *Geol. Cl.* 315; *Phys. Geo. Cl.* 557.
WAGNER, RICHARD, *Biog. Cl.* 180.
WALES, *Geo. Cl.* 34; *Child Cl.* 227; *Homes Cl.* 385; *Races Cl.* 597; *Topics Cl.* 613. See also *Zones Cl.* 643-676.
WALLACE OF SCOTLAND, *Biog. Cl.* 161.
WALL STREET, *Geo. Cl.* 5; *Civ. Bett. Cl.* 258.
WALRUS, *Animals Cl.* 101.
WAR OF AMERICAN REVOLUTION, *Amer. Hist. Cl.* 358; French Revolution, *Gen. Hist. Cl.* 334; French and Indian, *Amer. Hist. Cl.* 357; American Civil, *Amer. Hist. Cl.* 363; Mexican, *Amer. Hist. Cl.* 363; of 1812, *Amer. Hist. Cl.* 362; Spanish-American, *Amer. Hist. Cl.* 367.
WARNER, CHARLES DUDLEY, *Liter. Cl.* 453.
WARREN, GEN. JOSEPH, *Biog. Cl.* 133.
WARSHIPS, *Trans. Cl.* 636.
WASHINGTON, BOOKER T., *Biog. Cl.* 154; *Homes Cl.* 381; *Liter. Cl.* 453.

WASHINGTON, GEORGE, *Biog. Cl.* 131; *Liter. Cl.* 440; home of, *Geo. Cl.* 11; *Archit. Cl.* 113; *Eng. Comp. Cl.* 301.
WASHINGTON, D. C., *Geo. Cl.* 10; *Cities Cl.* 233, 239, 243; *Civ. Bett. Cl.* 250, 260, 267, 274, 278; *Eng. Comp. Cl.* 287, 301; *Homes Cl.* 378, 380.
WASHINGTON'S HEADQUARTERS, *Geo. Cl.* 6; *Homes Cl.* 380; Monument, *Geo. Cl.* 10; *Archit. Cl.* 119; *Civ. Bett. Cl.* 278.
WASHINGTON (STATE), *Geo. Cl.* 21; *Child Cl.* 226; *Homes Cl.* 380. See also *Zones Cl.* 643-676.
WATER, *Home Econ. Cl.* 415; *Prod. & Indus. Cl.* 576; ground water, *Phys. Geo. Cl.* 539; running water, *Geol. Cl.* 316; Water Associations, *Nature Cl.* 526; water gaps, *Topics Cl.* 623; transportation by, *Zones Cl.* 643-676; waterfronts, *Civ. Bett. Cl.* 275.
WATER BUFFALO, see under Buffalo.
WATERFALLS, *Phys. Geo. Cl.* 543, 544.
WATKINS GLEN, *Geo. Cl.* 6; *Eng. Comp. Cl.* 292; *Phys. Geo. Cl.* 537, 541, 544, 556.
WAVES, *Nature Cl.* 530, 531; *Topics Cl.* 623.
WEATHERING, *Nature Cl.* 531; *Phys. Geo. Cl.* 537.
WEAVING, *Geo. Cl.* 18, 24, 27, 30, 35, 42, 49, 55; *Home Econ. Cl.* 425; *Man. Tr. Cl.* 487; *Prod. & Indus. Cl.* 577, 578, 579, 580.
WEBSTER, DANIEL, *Biog. Cl.* 135; *Liter. Cl.* 453; home of, *Geo. Cl.* 4; *Archit. Cl.* 113; *Homes Cl.* 380.
WELLINGTON, DUKE OF, *Biog. Cl.* 168.
WELLS, *Agri. Cl.* 79.
WENTWORTH, THOMAS, *Biog. Cl.* 166.
WEST INDIES, *Geo. Cl.* 27, 28; *Races Cl.* 599; *Topics Cl.* 610.
WEST POINT, *Geo. Cl.* 6; *Eng. Comp. Cl.* 292.
WESTERLIES, ZONE OF, *Zones Cl.* 665.
WESTMINSTER ABBEY, *Geo. Cl.* 33; *Archit. Cl.* 111; *Eng. Comp. Cl.* 301; *Gen. Hist. Cl.* 332.
WHALE, *Animals Cl.* 102; *Eng. Comp. Cl.* 308; *Nature Cl.* 520.
WHALING INDUSTRY, *Prod. & Indus. Cl.* 575, 587.
WHEAT, *Geo. Cl.* 21, 25; *Agri. Cl.* 67, 70; *Bot. Cl.* 217; *Nature Cl.* 527; *Home Econ. Cl.* 407; *Prod. & Indus. Cl.* 569.
WHEN TO USE.....1
WHITBECK, R. H., Classification by, 567-588.
WHITE HOUSE, THE, *Geo. Cl.* 10; *Archit. Cl.* 113; *Civ. Bett. Cl.* 267; *Eng. Comp. Cl.* 301; *Homes Cl.* 378.
WHITE MOUNTAINS, *Geo. Cl.* 4; *Eng. Comp. Cl.* 292.
WHITMAN, WALT, *Liter. Cl.* 454.

WHITTIER, J. G., *Biog. Cl.* 139; *Liter. Cl.* 454.
WIGHT, ISLE OF, *Geo. Cl.* 33; *Eng. Comp. Cl.* 288; *Homes Cl.* 384.
WILCOX, ELLA WHEELER, *Liter. Cl.* 456.
WILDERNESS OF JUDEA, *Geo. Cl.* 53; *Eng. Comp. Cl.* 295; Sinai, *Geo. Cl.* 53.
WILHELM, KAISER, *Biog. Cl.* 180.
WILLIAM THE CONQUEROR, *Biog. Cl.* 160.
WILLIAM I., *Biog. Cl.* 179.
II., *Biog. Cl.* 160.
WILSON, WOODROW, *Biog. Cl.* 154; *Homes Cl.* 381; *Liter. Cl.* 456.
WIND, *Nature Cl.* 531; *Phys. Geo. Cl.* 538; erosion by, *Nature Cl.* 531.
WINDMILLS, *Geo. Cl.* 41; *Agri. Cl.* 79.
WINDSOR CASTLE, *Geo. Cl.* 33; *Archit. Cl.* 111; *Eng. Comp. Cl.* 301; *Gen. Hist. Cl.* 332, 336.
WINNIPEG, MANITOBA, *Geo. Cl.* 25; *Cities Cl.* 235, 239, 242, 247; *Civ. Bett. Cl.* 252.
WINTER RESORTS, *Geo. Cl.* 12, 42; *Cities Cl.* 244; *Topics Cl.* 623.
WINTHROP, JOHN, *Biog. Cl.* 129.
WIRING, STREET, *Civ. Bett. Cl.* 257-266, 284.
WISCONSIN, *Geo. Cl.* 15; *Eng. Comp. Cl.* 293. See also *Zones Cl.* 643-676.
WISTER, OWEN, *Liter. Cl.* 456.
WOLFE, GEN. JAMES, *Biog. Cl.* 131, 157, 167.
WOLSEY, CARDINAL, *Biog. Cl.* 163.
WONDERS, WORLD, *Eng. Comp. Cl.* 310.
WOOD PULP PAPER, *Geo. Cl.* 15, 16; *Agri. Cl.* 78; *Eng. Comp. Cl.* 312; *Nature Cl.* 525; *Prod. & Indus. Cl.* 586.
WOODEN WARE, *Man. Tr. Cl.* 488.
WOOL AND ITS MANUFACTURE, *Geo. Cl.* 4, 55, 61; *Agri. Cl.* 78; *Home Econ. Cl.* 420; *Nature Cl.* 522; *Prod. & Indus. Cl.* 578; Golden Fleece myth, *Myth. Cl.* 509.
WORCESTER (potteries), *Geo. Cl.* 33; *Home Econ. Cl.* 425; *Man. Tr. Cl.* 488; *Prod. & Indus. Cl.* 584.
WORDSWORTH, WILLIAM, *Liter. Cl.* 480.
"WORLD VISUALIZED".....xxiii
WORM, SILK, *Animals Cl.* 99; *Nature Cl.* 522.
WREN, SIR CHRISTOPHER, *Biog. Cl.* 166.
WRIGHT, ORVILLE AND WILBUR, *Biog. Cl.* 156.
WYOMING, *Geo. Cl.* 16. See also *Zones Cl.* 643-676.
XENOPHON, *Biog. Cl.* 201.
XERXES, *Biog. Cl.* 203; *Gen. Hist. Cl.* 329.
YELLOW RACES, *Races Cl.* 592; *Topics Cl.* 622.
YELLOW SEA, *Geo. Cl.* 59; *Phys. Geo. Cl.* 565.
YELLOWSTONE PARK, *Geo. Cl.* 16, 17; *Eng. Comp. Cl.* 288, 293, 297, 310; *Phys. Geo. Cl.* 545, 557.
YOSEMITE VALLEY, *Geo. Cl.* 19; *Eng. Comp. Cl.* 288, 293;

Phys. Geo. Cl. 538, 539, 545, 555, 556.
YOUNG, BRIGHAM, *Biog. Cl.* 137.
YUKON, *Geo. Cl.* 25; *Amer. Hist. Cl.* 367; *Prod. & Indus. Cl.* 583; *Zones Cl.* 674, 675.
ZAMBESI RIVER, *Geo. Cl.* 51.
ZANZIBAR, *Geo. Cl.* 51; *Eng. Comp. Cl.* 299.
ZEBRAS, *Animals Cl.* 102; *Eng. Comp. Cl.* 309; *Nature Cl.* 520.
ZEELAND (HOLLAND), *Geo. Cl.* 41.
ZENT, *Geo. Cl.* 27.
ZERMATT, *Geo. Cl.* 45; *Eng. Comp. Cl.* 295.
ZEUS, *Myth. Cl.* 497.
Zone Life Classification, 643-676.
ZULUS, *Geo. Cl.* 52; *Homes Cl.* 391; *Races Cl.* 501.
ZUYDER ZEE, HOLLAND, *Geo. Cl.* 41; *Eng. Comp. Cl.* 304.
ZWINGLI, *Biog. Cl.* 182.

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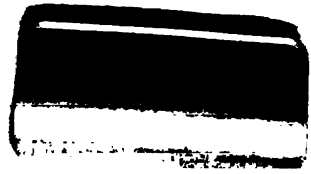
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